

TraQr[®] Reports

Industrial Maintenance & Protective Coatings

United States | June 2024



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01

Overview

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Overview

- Industrial Maintenance and Protective (IM&P) coatings play a crucial role in diverse environments, tackling challenges such as corrosion in industrial settings and providing long-term protection and aesthetic appeal in commercial applications.
- The IM&P market in the United States was \$2.5 billion in 2023.
- Collaborating with the American Coatings Association, ChemQuest divides IM&P coatings into five key segments: **Oil & Chemical, Infrastructure, Construction, Utilities, and Other applications.**
- The **Oil & Chemical** segment stands out, commanding over 50% of the market share.
- In contrast, the **Construction and Infrastructure** segments collectively represent over 30% of the market.
- To enhance our analysis, we've carefully selected 18 indicators strongly linked to these segments.
- Our comprehensive examination of the IM&P coatings market highlights the significant contributions of each segment.

Economic sectors show mixed trends: Oil & Chemical face challenges, Infrastructure and Construction highlight growth opportunities, Utilities offer stability, overall indicators point to resilience

- **Oil & Chemical:** The current contraction phase indicates significant challenges ahead. Companies should prepare for volatility by exploring diversification strategies and investments in innovation to mitigate risks. Close monitoring of global oil prices and regulatory changes is essential.
- **Infrastructure:** Mixed trends necessitate targeted strategies. Businesses should focus on growing segments like defense and chemical products while addressing weaknesses in declining areas such as beverage and paper products manufacturing. Strategic investments in technology and efficiency improvements can help navigate these complex trends.
- **Construction:** Predominantly rising trends highlight robust sector health. Companies should capitalize on growth opportunities, particularly in public works and nonresidential construction, while being cautious of potential downturns in specific sub-segments like transportation construction. A balanced approach can ensure sustained growth and stability.
- **Utilities:** Moderate, stable growth presents opportunities for long-term investments in energy infrastructure and renewable projects. Enhancing grid reliability, integrating renewable energy sources, and exploring innovative technologies can help capitalize on the sector's growth potential and contribute to sustainability.
- **Overall Economic Indicators:** Rising trends suggest a resilient economy, encouraging strategic expansions and innovations across various sectors. Businesses should leverage this positive environment to explore new markets, invest in R&D, and enhance their competitive positioning, ensuring sustained growth and profitability.

By focusing on these insights and recommendations, companies can navigate the complexities of the construction sector and capitalize on emerging opportunities.

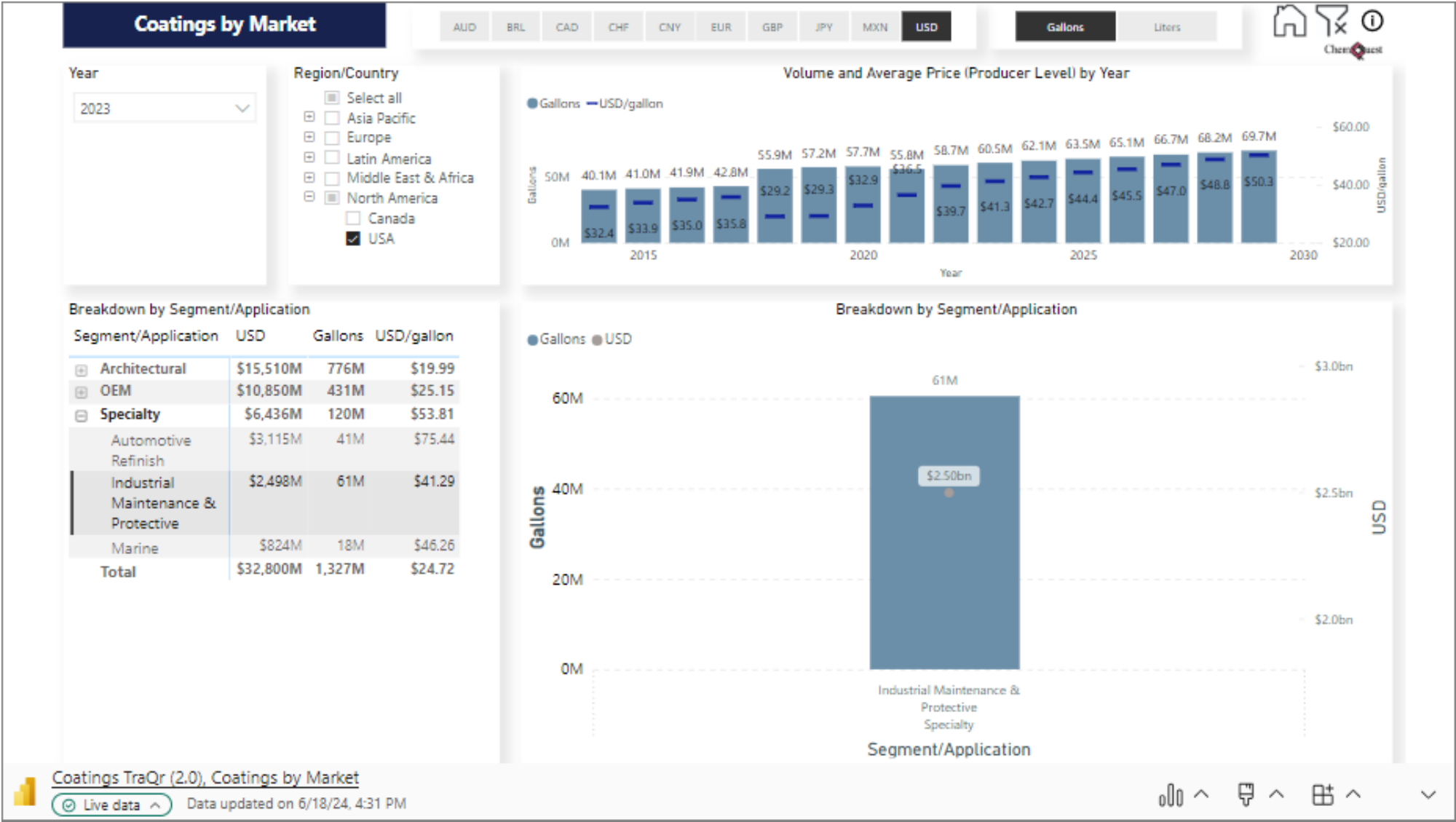
02

Coatings Market Data

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The IM&P market in the United States was \$2.5 billion in 2023



NOTE:
Green highlight = increase since prior quarter
Red highlight = decrease since prior quarter

04

Methodology

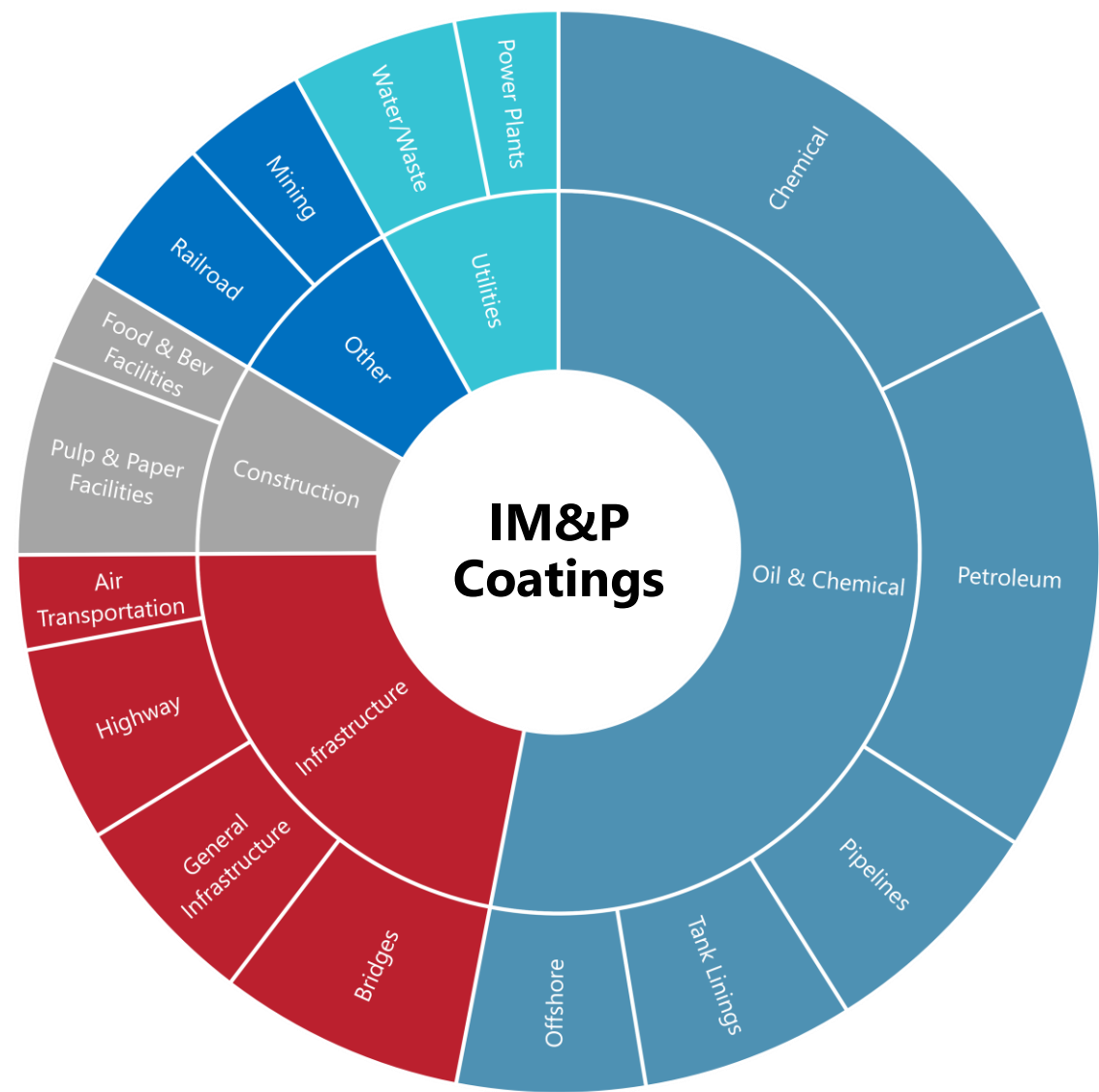
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ChemQuest's Approach to Uncovering Key Trends in Industrial Maintenance & Protective Coatings

- ChemQuest commenced its analysis with an extensive list of more than 1,000 economic indicators pertinent to the Industrial Maintenance & Protective Coatings (IM&P) market.
- Through rigorous evaluation using the [TraQr®](#) Dashboard, the ChemQuest consulting team refined this list to around 100 key indicators, ultimately narrowing it down further to the most relevant 18 indicators that correlated best to the IM&P coatings market.
- Additionally, the team employed the [Business Cycle Analysis](#) tool to track indicators in business cycles to assess markets, identify trends, strategize proactively, and capture emerging opportunities. The insights derived from this monthly report not only offer a competitive edge but also empower you to make informed, strategic decisions well in advance of other market participants.
- In collaboration with the American Coatings Association, ChemQuest divides IM&P coatings into five key segments: **Oil & Chemical, Infrastructure, Construction, Utilities, and Other applications.**
- The selected 18 indicators have been strategically aligned within each of these five segments, providing a nuanced and comprehensive analysis tailored to the distinct dynamics of each category.
- Mark Twain said that *"History doesn't repeat itself, but it does rhyme."* CQ acknowledges that closely correlated indicators may not perfectly mirror the market's movements but will echo its patterns and are therefore important to monitor.

ChemQuest categorizes IM&P coatings into five major segments and numerous sub-segments



Understanding Business Cycle Analysis

Business Cycle Analysis (BCA) is a tool within TraQr® Dashboard that enables users to track the momentum of Key Economic Indicators in order to assess the market, identify trends, and capitalize on emerging opportunities.

Using BCA, follow the key indicators for Industrial Maintenance & Protective to identify actionable changes in the business cycle.

BCA uses four phases to describe the business cycle:



Advancing: The metric or indicator is down year on year, but that rate of decline is decreasing. The market is gearing up for growth.



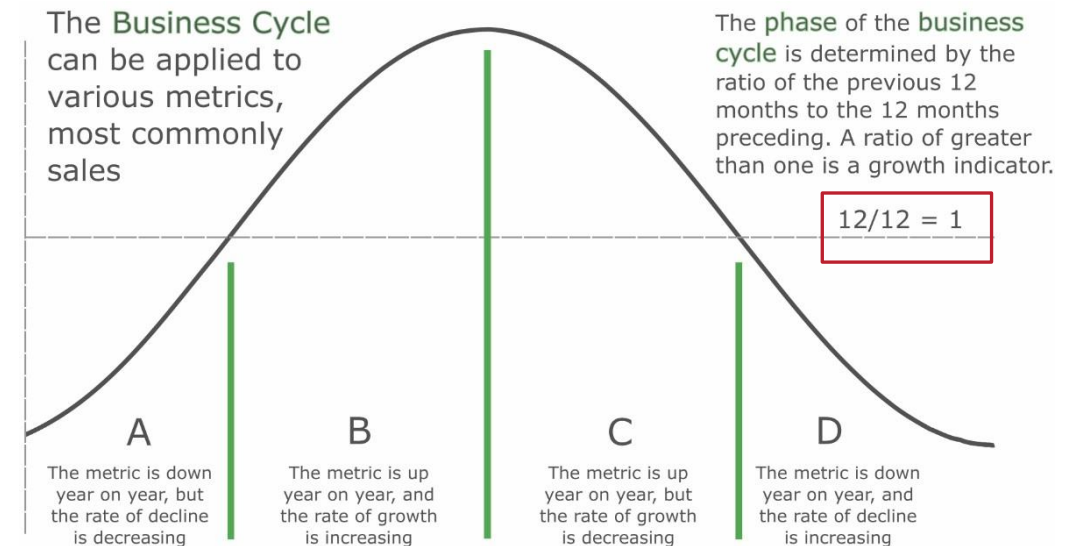
Best: The indicator is up compared to the prior year, and the rate of that growth is increasing. The market is in a growth cycle.



Cautionary: The indicator is still up, but the rate of growth is decreasing. The market is slowing down.



Depressionary: The indicator is down year on year, and the rate of that decline is increasing. The market is declining.



Business Cycle Analysis: Action Points by Phase



Marketing	<ul style="list-style-type: none"> Develop and begin advertising and marketing programs 	<ul style="list-style-type: none"> Maintain marketing spend Begin exploring new markets 	<ul style="list-style-type: none"> Reduce advertising 	<ul style="list-style-type: none"> Further reduce advertising; be very selective
HR	<ul style="list-style-type: none"> Hire top people Add sales staff Begin training new hires 	<ul style="list-style-type: none"> Accelerate training 	<ul style="list-style-type: none"> Cut training Begin workforce reductions 	<ul style="list-style-type: none"> Eliminate overtime Cut overhead hours Combine departments and reduce management
Inventory management	<ul style="list-style-type: none"> Build inventories in high-volume lines 	<ul style="list-style-type: none"> Continue building inventory 	<ul style="list-style-type: none"> Decrease inventory 	<ul style="list-style-type: none"> Monitor inventory closely
Leases and contracts	<ul style="list-style-type: none"> Negotiate union contracts Enter into leases Lock in raw material/commodity prices 	<ul style="list-style-type: none"> Start being cautious with long-term purchase commitments 	<ul style="list-style-type: none"> Avoid long-term purchase commitments (late Phase C) 	<ul style="list-style-type: none"> Avoid long-term purchasing commitments Review all lease agreements
Capital spend	<ul style="list-style-type: none"> Expand facilities Place capital equipment orders 	<ul style="list-style-type: none"> Continue expanding (early Phase B) Freeze expansion plans (later Phase B) Outsource production Spin off non-strategic or weak operations 	<ul style="list-style-type: none"> Increase requirements to justify CapEx (capital expenditures) 	<ul style="list-style-type: none"> Increase requirements for CapEx Seize on opportunistic M&A (late Phase D) Consider buying commercial property (late Phase D)

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Relevant Market Indicators

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Sector Analysis: Construction, Infrastructure, Oil & Chemical, Utilities, and Others Show Divergent Trends with Predominant Contractions and Isolated Recoveries

Segment	Indicator	Correlation Coefficient	Phase	Trend
Oil & Chemical	PPI: Petroleum Lubricating Oil and Grease Manufacturing (USA)	0.96		
	PPI: Oil and Gas Field Machinery and Equipment Manufacturing (USA)	0.90		
	Crude Oil Production (USA)	0.85		
Infrastructure	Manufacturers' Value of Shipments: Meat, Poultry, and Seafood Product Processing	0.97		
	Manufacturers' Value of Shipments: Beverage and Tobacco Products	0.96		
	Manufacturers' Value of Shipments: Beverage Manufacturing	0.93		
	Manufacturers' Value of Shipments: Paper Products	0.91		
	Manufacturers' Value of Shipments: Defense Capital Goods	0.90		
	Manufacturers' Value of Shipments: Chemical Products	0.85		
Construction	Highway and Street Construction (USA)	0.94		
	Transportation Construction (USA)	0.92		
	Nonresidential Construction (USA)	0.90		
	Manufacturers' Value of Shipments: Construction Materials and Supplies	0.89		

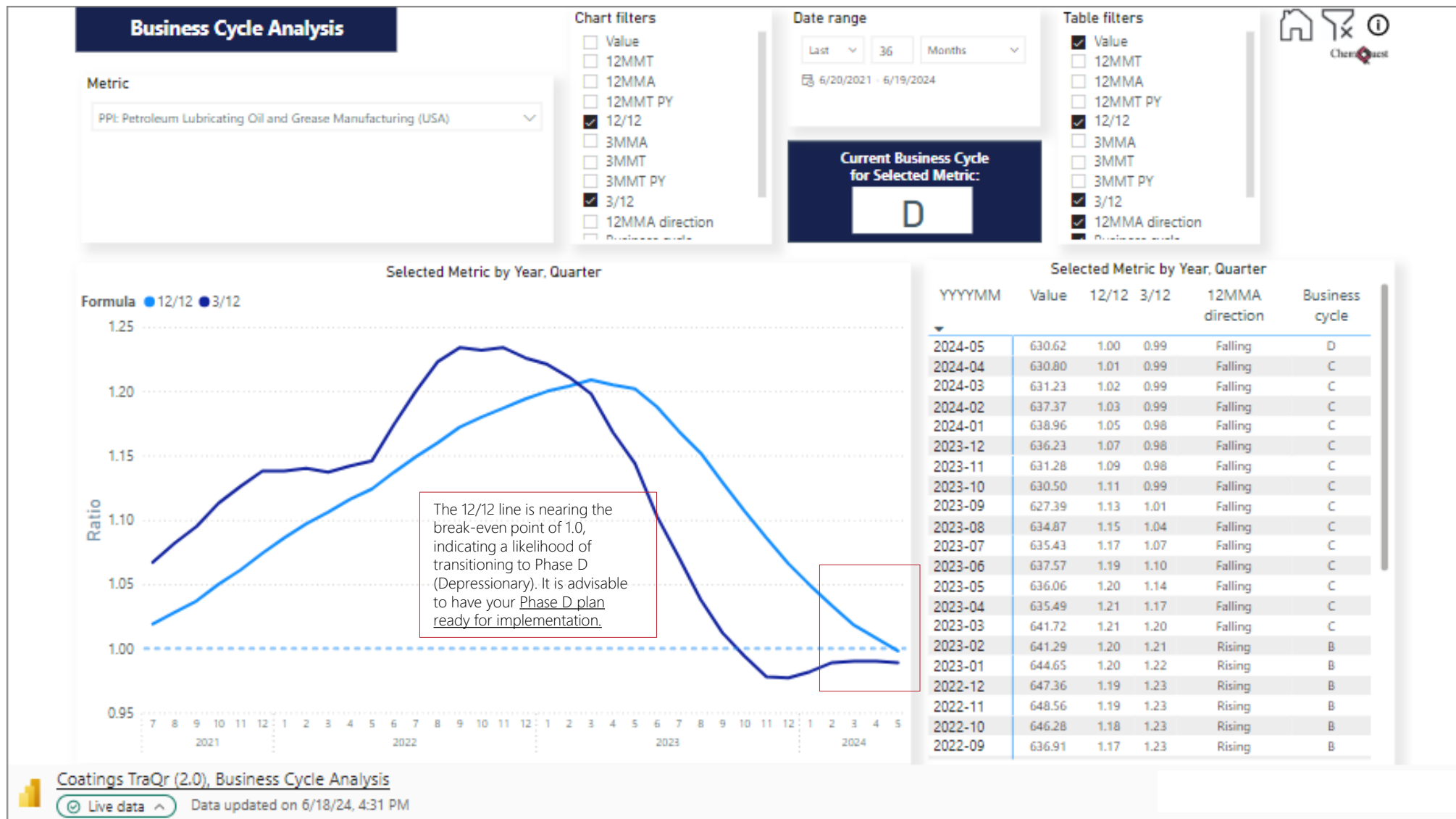
NOTE:
The correlation coefficient measures the degree and direction of the linear relationship between an indicator variable and the IM&P coatings market.

Sector Analysis: Construction, Infrastructure, Oil & Chemical, Utilities, and Others Show Divergent Trends with Predominant Contractions and Isolated Recoveries

Segment	Indicator	Correlation Coefficient	Phase	Trend
Construction	Sewage and Waste Disposal Construction (USA)	0.85		
	Total Construction (USA)	0.84		
Utilities	Industrial Production: Utilities: Electric and Gas Utilities	0.76		
Other	Economic Index (USA)	0.94		
	Personal Consumption Expenditures: Durable Goods (USA)	0.92		

NOTE:
The correlation coefficient measures the degree and direction of the linear relationship between an indicator variable and the IM&P coatings market.

In March 2023, Petro Lubricating Oil and Grease Manufacturing transitioned from growth (B) to caution (C), indicating a sustained decline. While there's been a slight recovery in the 3/12 line, monitoring this indicator is essential.



PPI: Petroleum Lubricating Oil and Grease Manufacturing (USA)

Business Phase:



Business Cycle Trend:



Correlation Coefficient:

0.96

Coatings Segment:

Oil & Chemical

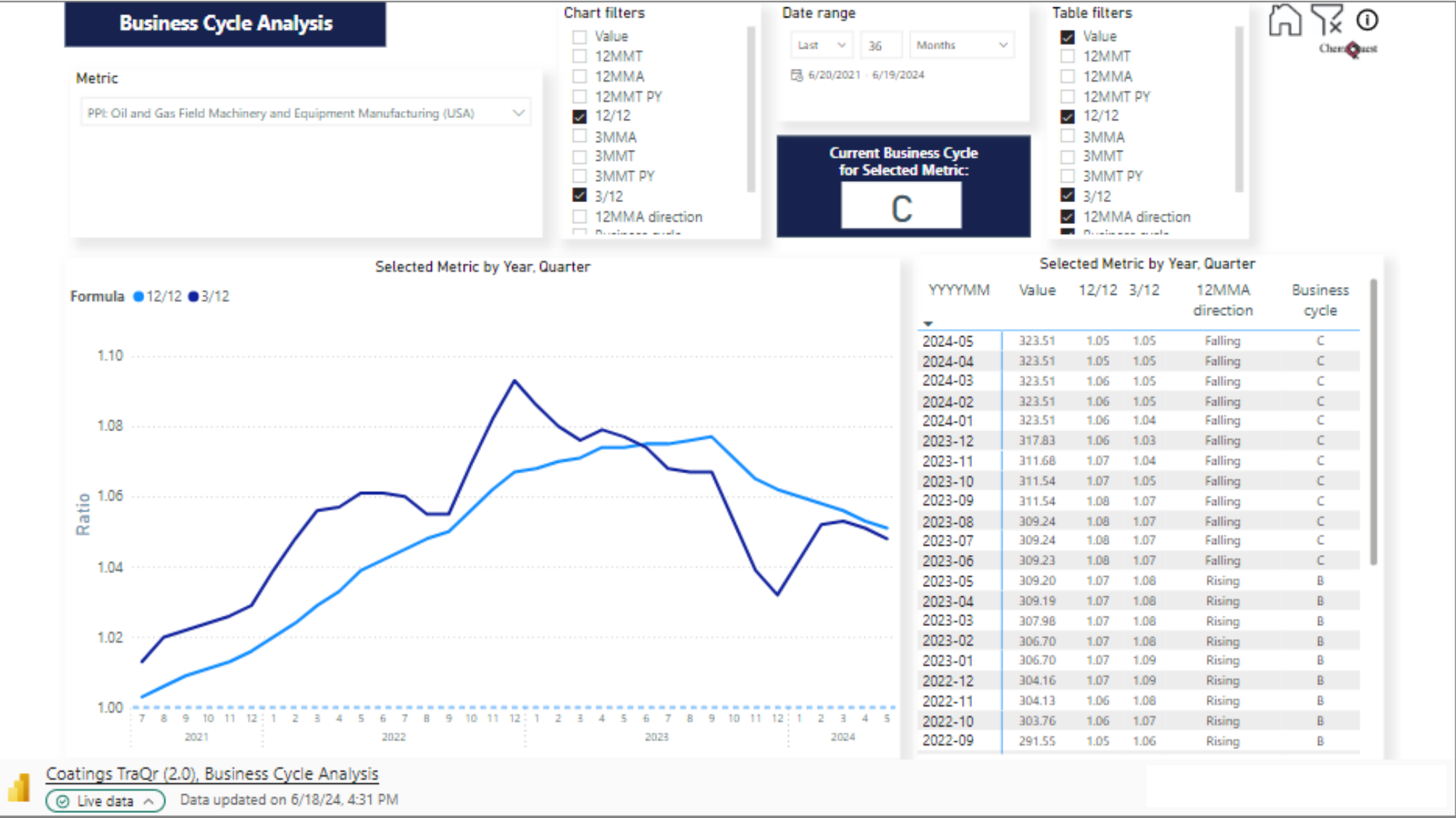
NOTE:

- Business Cycle Analysis relies on recent data and judgment for predictions, while 6-month forecasts primarily rely on historical data including cyclicalities which may contribute to observed discrepancies.
- To maintain a 75% confidence level over time, the spread will gradually increase.

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O&G Field Machinery and Equipment Manufacturing experienced significant growth until May 2023, followed by a sharp decline into cautionary territory; early 2024 shows a rebound with potential crossover, but requires close monitoring.



PPI: Oil and Gas Field Machinery and Equipment Manufacturing (USA)

Business Phase:

Business Cycle Trend:

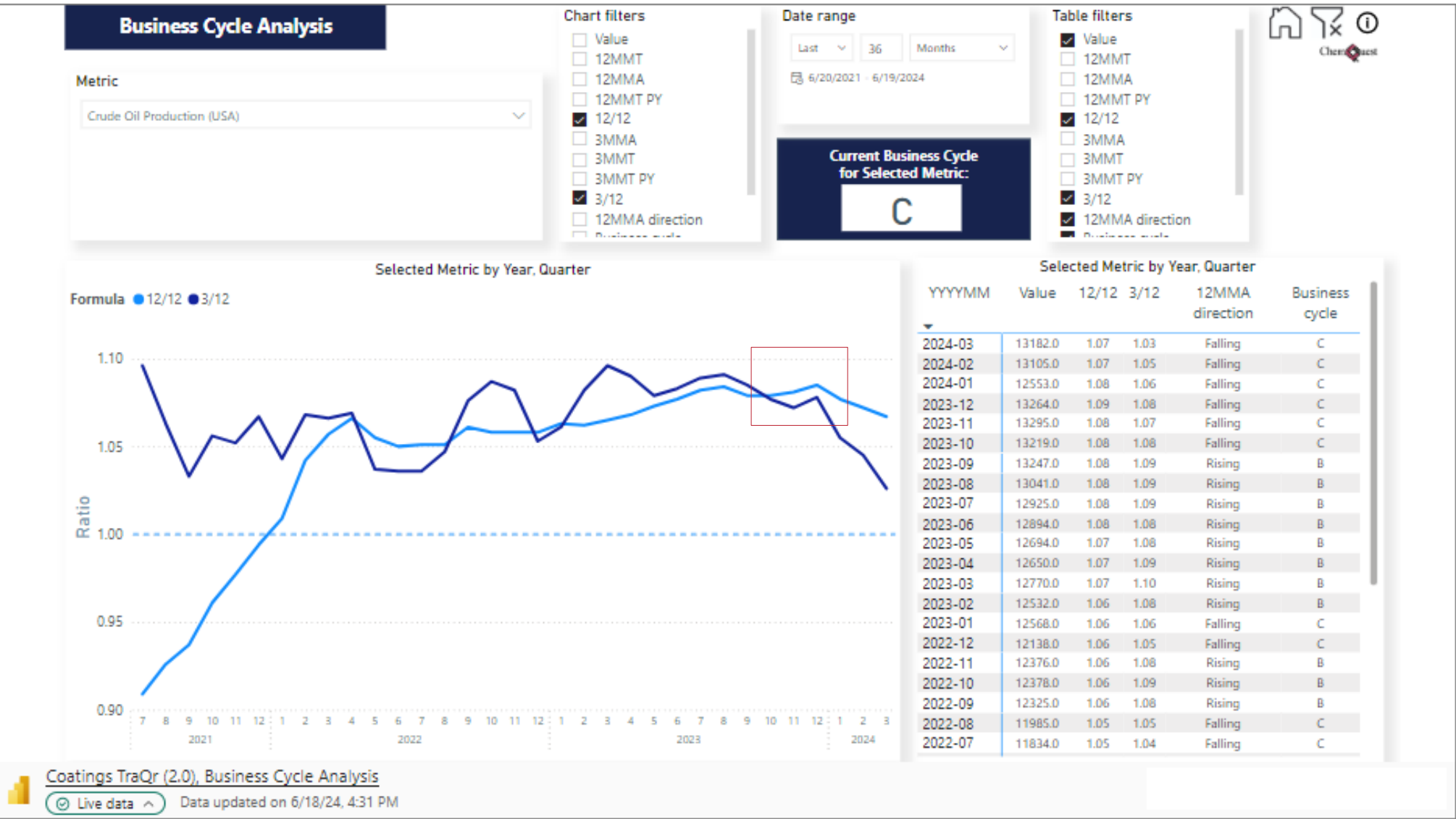
Correlation Coefficient:

0.90

Coatings Segment:

Oil & Chemical

Crude Oil Production shifts abruptly into a cautionary phase, marked by volatile movements and frequent crosses of key lines. Close monitoring is advised, given its rapid transition from a growth phase in September to cautionary just a month later.



Crude Oil Production (USA)

Business Phase:

Business Cycle Trend:

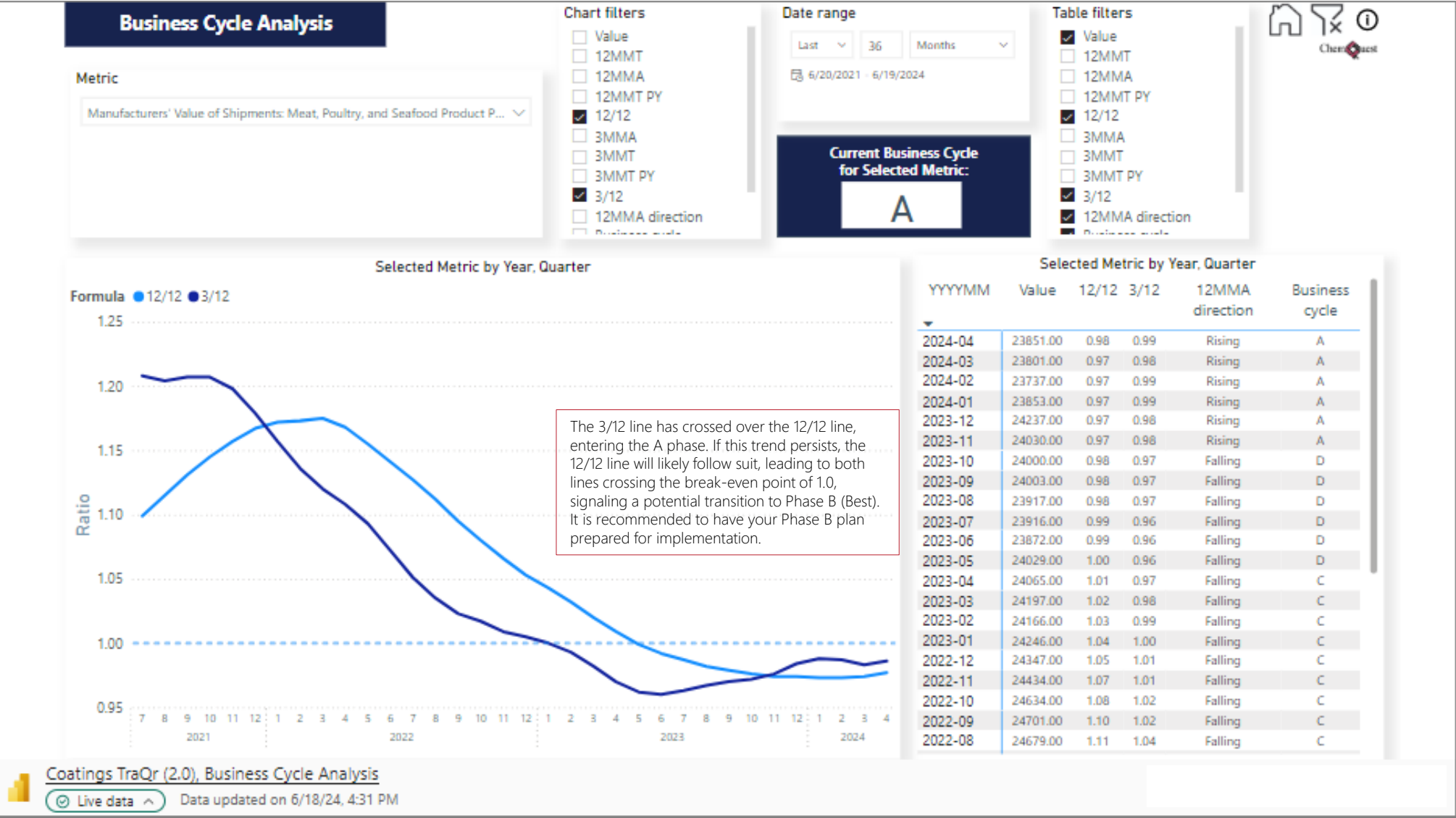
Correlation Coefficient:

0.85

Coatings Segment:

Oil & Chemical

The Meat, Poultry, and Seafood Product Processing industry has shifted from a decline to an advancing phase, indicating improvement and the need to prepare for continued growth.



Coatings TraQr (2.0), Business Cycle Analysis

Live data Data updated on 6/18/24, 4:31 PM

Manufacturers' Value of Shipments: Meat, Poultry, and Seafood Product Processing

Business Phase:

A

Business Cycle Trend:

Rising

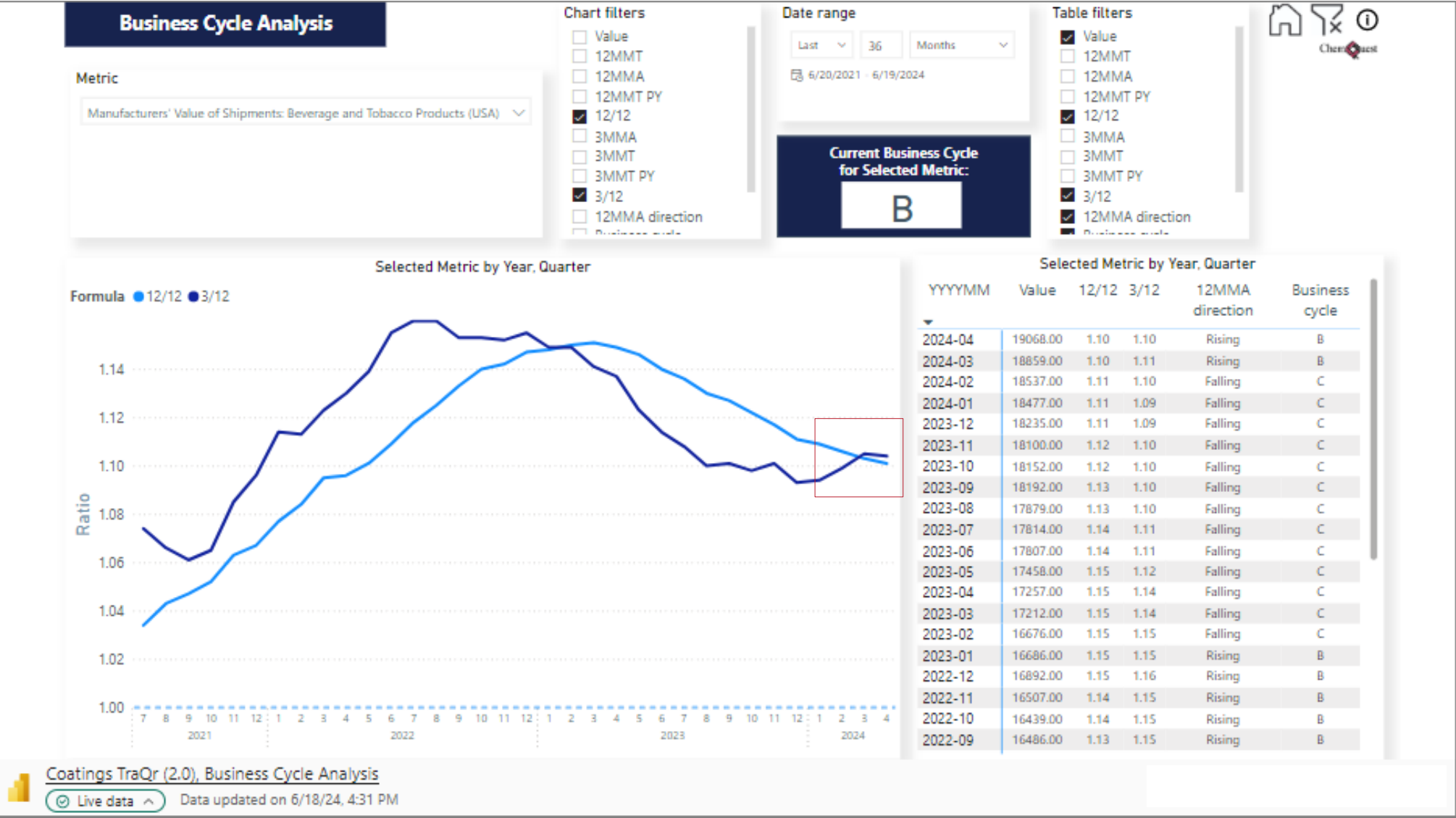
Correlation Coefficient:

0.97

Coatings Segment:

Infrastructure

Beverage and Tobacco Products have transitioned from a decline (phase C) to recovery (phase B), indicating potential improvement.



Manufacturers' Value of Shipments: Beverage and Tobacco Products

Business Phase:

B

Business Cycle Trend:

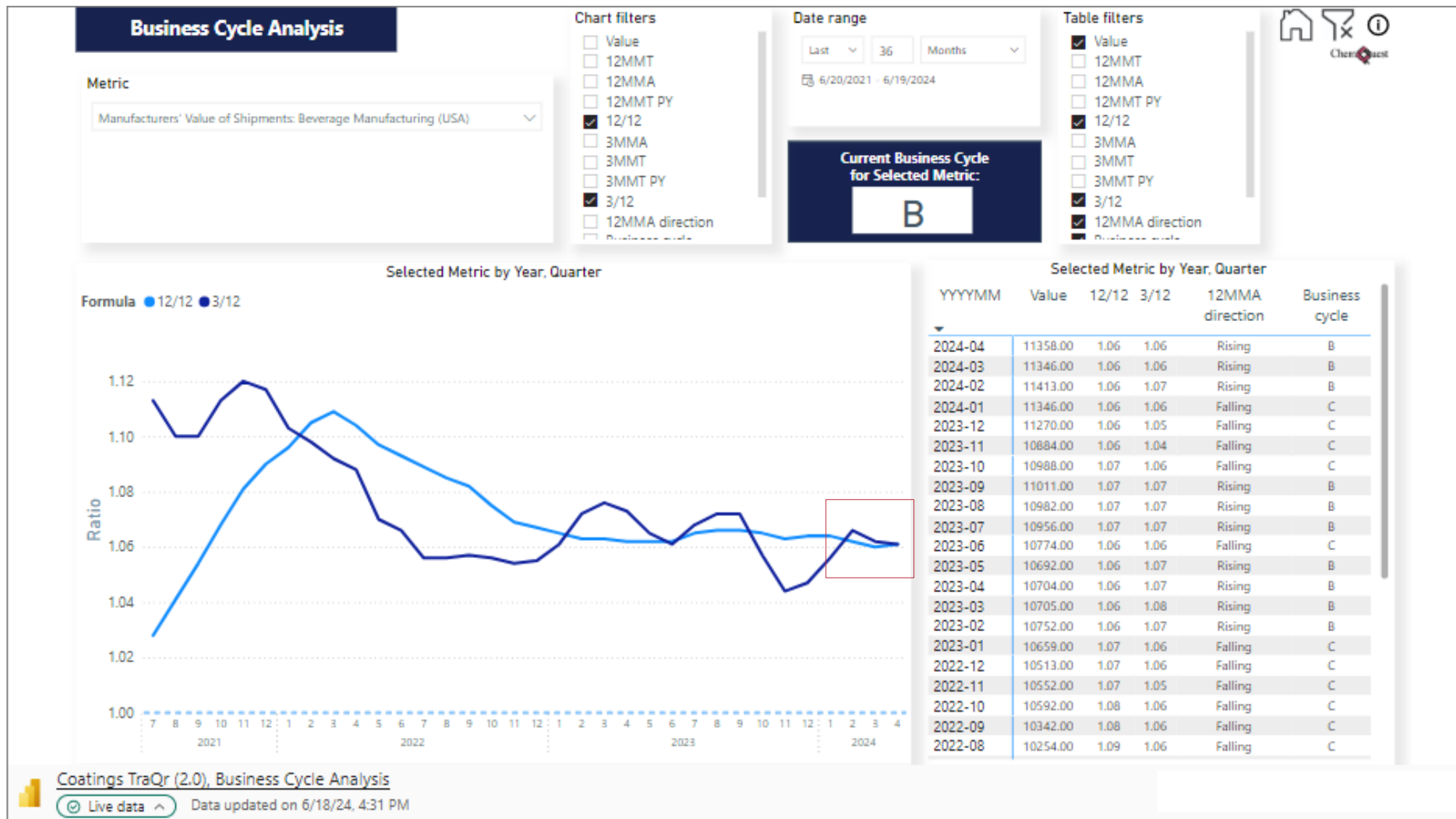
Correlation Coefficient:

0.96

Coatings Segment:

Infrastructure

Beverage Manufacturing recently entered the growth phase, with 3/12 and 12/12 lines nearing a critical crossover point. The trend has potential to move back to cautionary, so monitoring is advised.



Manufacturers' Value of Shipments: Beverage Manufacturing

Business Phase:



Business Cycle Trend:



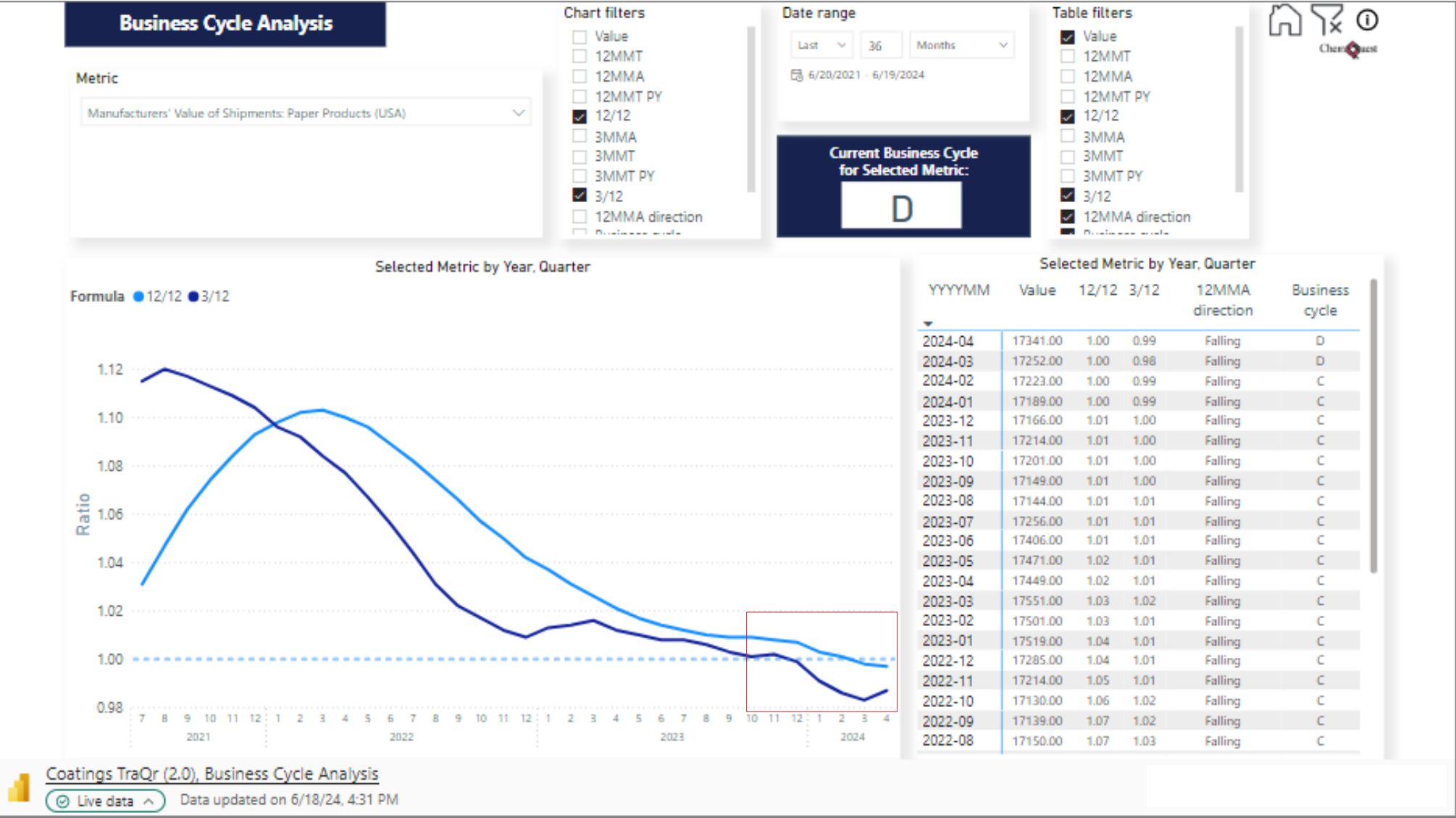
Correlation Coefficient:

0.93

Coatings Segment:

Infrastructure

Paper Products transitioned to depressionary phase as both 3/12 and 12/12 lines fall below break-even point and have remained in phase D.



Manufacturers' Value of Shipments: Paper Products

Business Phase:

Business Cycle Trend:

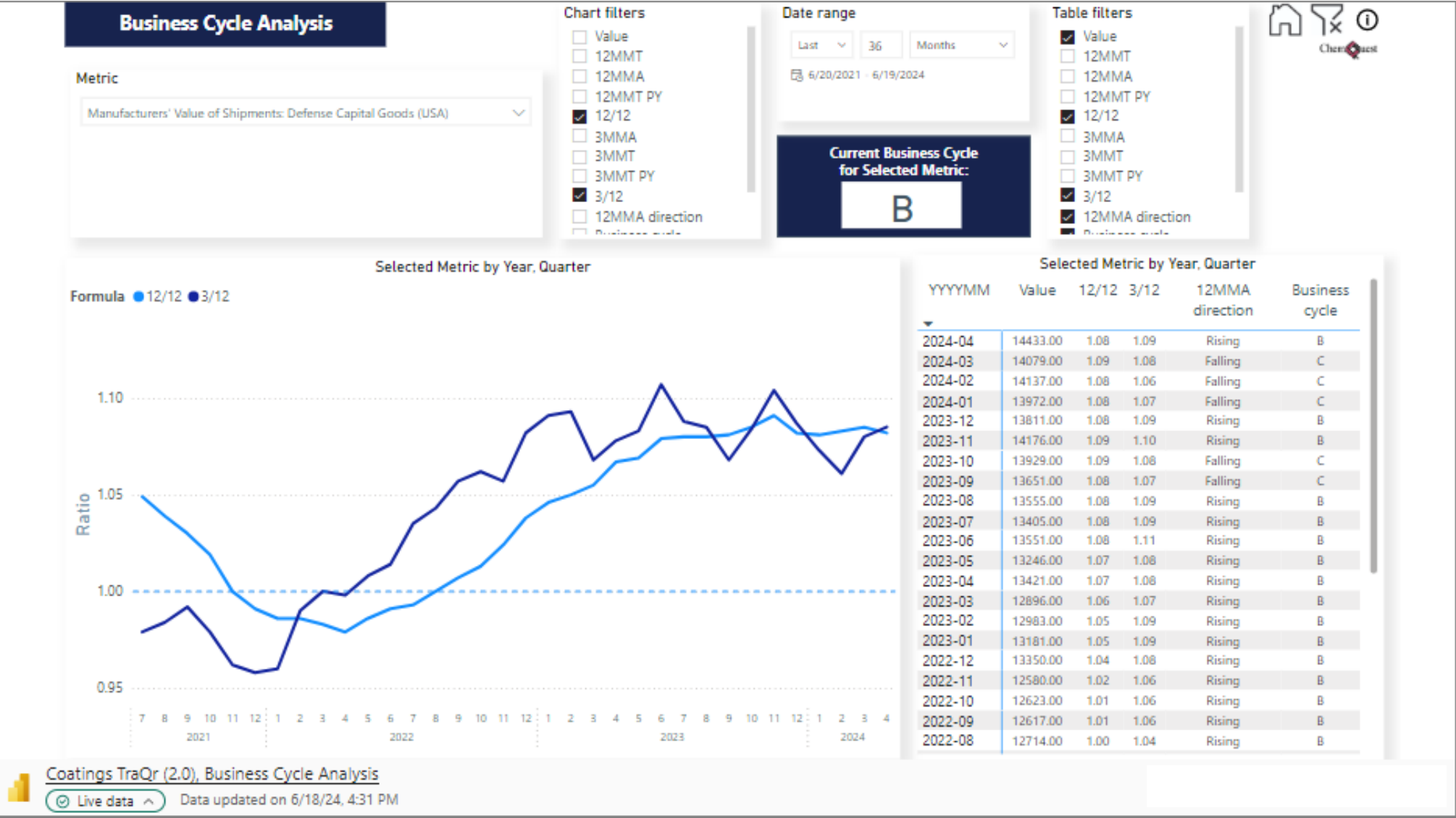
Correlation Coefficient:

0.91

Coatings Segment:

Infrastructure

Defense Capital Goods exhibit volatility, oscillating between phases B and C in recent months.



Coatings TraQr (2.0), Business Cycle Analysis

Live data

Data updated on 6/18/24, 4:31 PM

Manufacturers' Value of Shipments: Defense Capital Goods

Business Phase:

B

Business Cycle Trend:

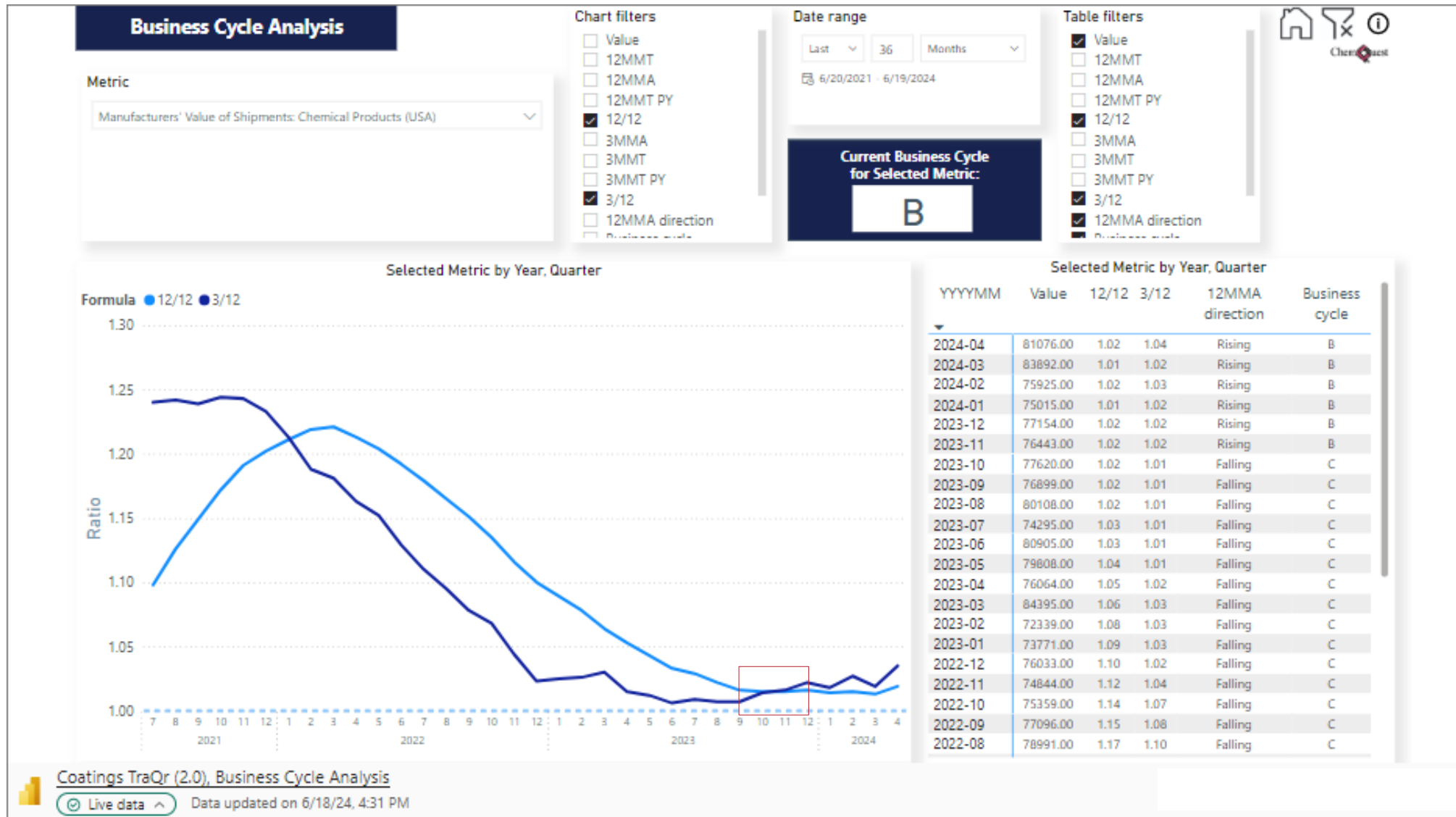
Correlation Coefficient:

0.90

Coatings Segment:

Infrastructure

Chemical Products transition from phase C to phase B after nearly two years, showing signs of recovery.



Manufacturers' Value of Shipments:
Chemical Products

Business Phase:



Business Cycle Trend:



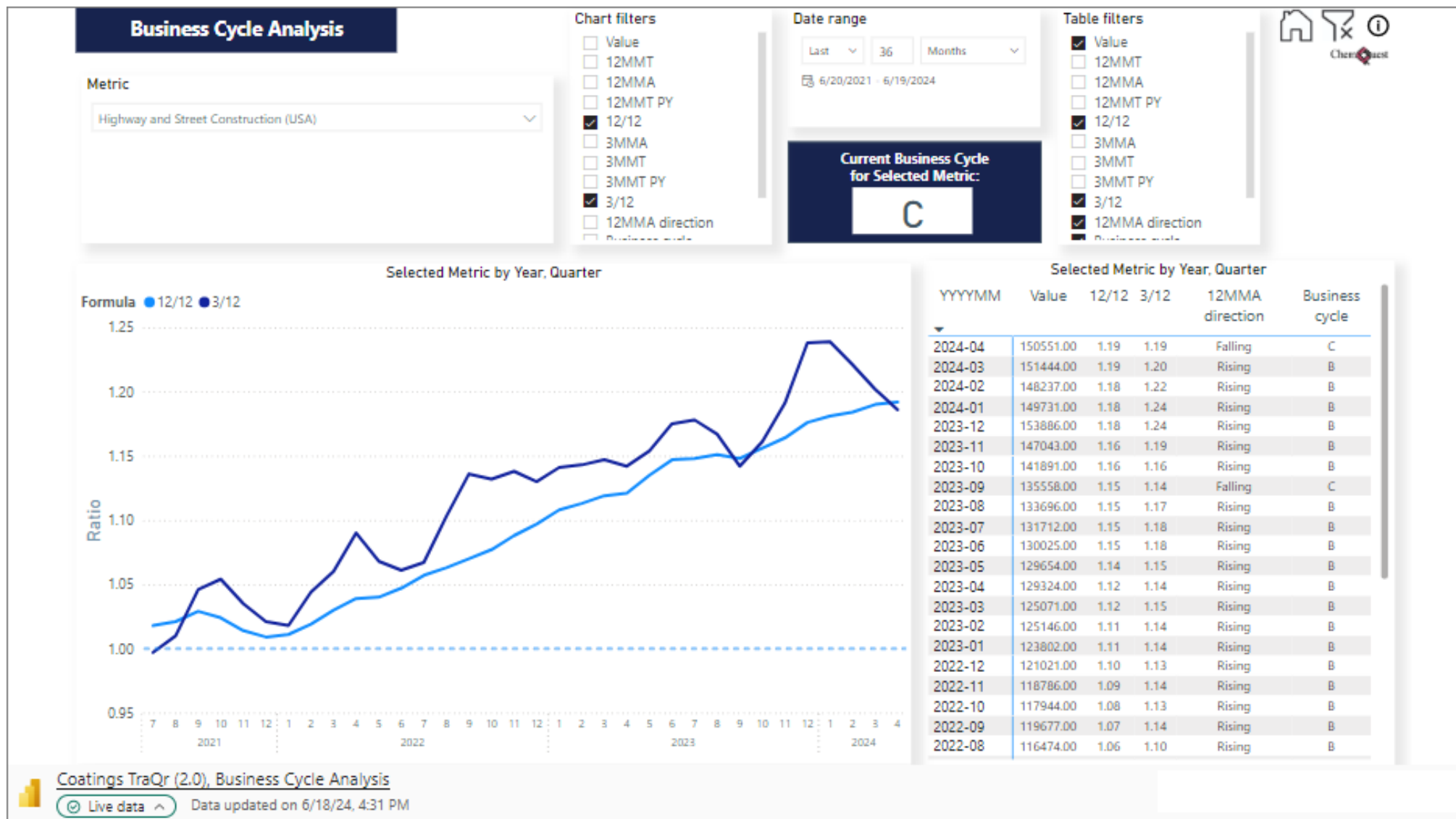
Correlation Coefficient:

0.85

Coatings Segment:

Infrastructure

As predicted, Highway and Street Construction enters Contraction Phase after being in (B) phase since October 2023.



Highway and Street Construction (USA)

Business Phase:



Business Cycle Trend:



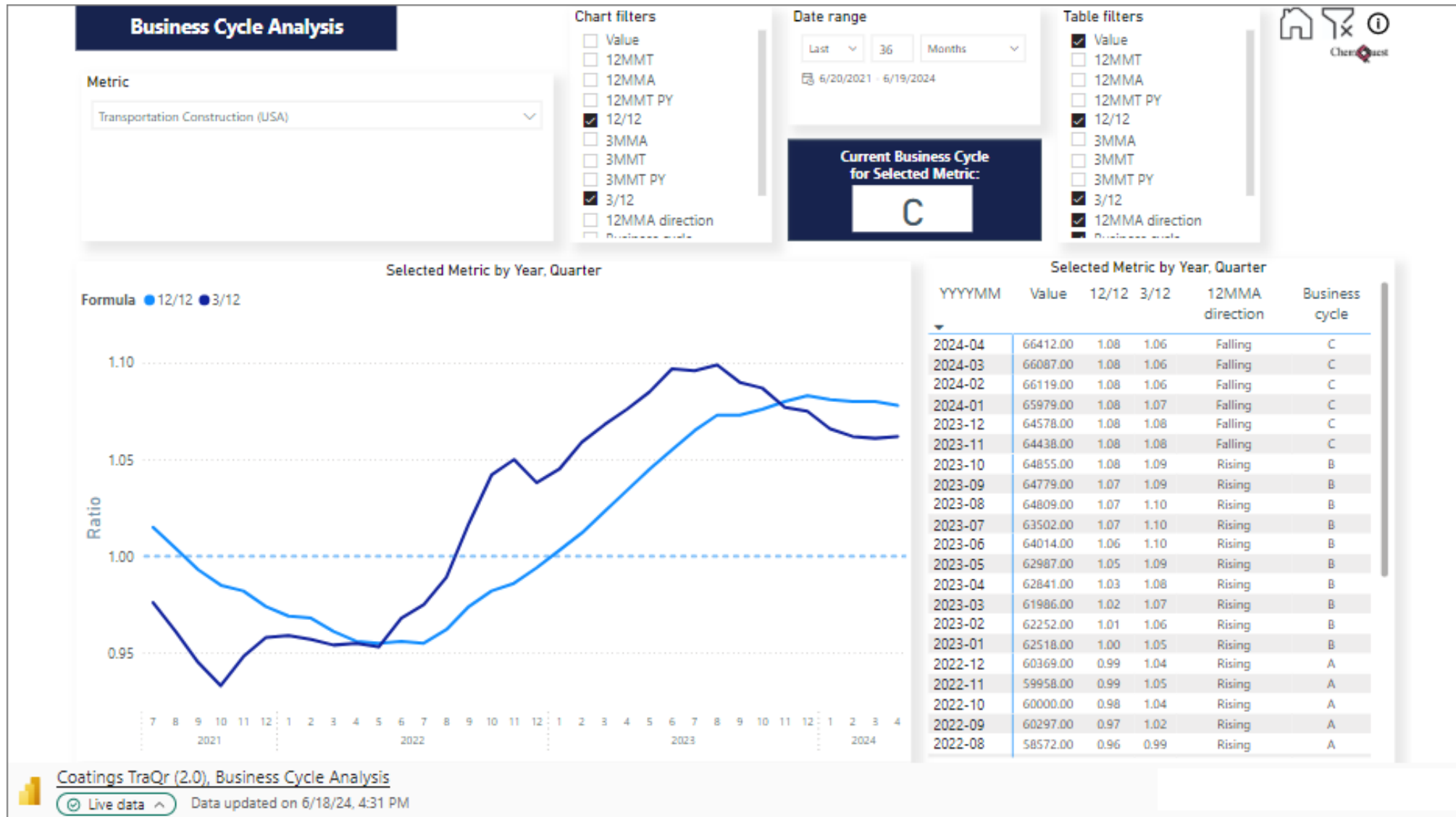
Correlation Coefficient:

0.94

Coatings Segment:

Construction

Transportation Construction has transitioned to a cautionary phase (C), with the 3/12 line falling, and the 12/12 line plateauing.



Transportation Construction (USA)

Business Phase:



Business Cycle Trend:



Correlation Coefficient:

0.92

Coatings Segment:

Construction

Nonresidential Construction shows growth since February 2022, but recent a slowdown indicates transition to cautionary phase (C) as the 3/12 crossed the 12/12 line—indicating a slower rate of growth.



Nonresidential Construction (USA)

Business Phase:



Business Cycle Trend:



Correlation Coefficient:

0.90

Coatings Segment:

Construction

Construction Materials transitioned from phase C to phase B growth in October 2023, as indicated by the 3/12 and 12/12 lines crossing.



Manufacturers' Value of Shipments: Construction Materials and Supplies

Business Phase:

B

Business Cycle Trend:

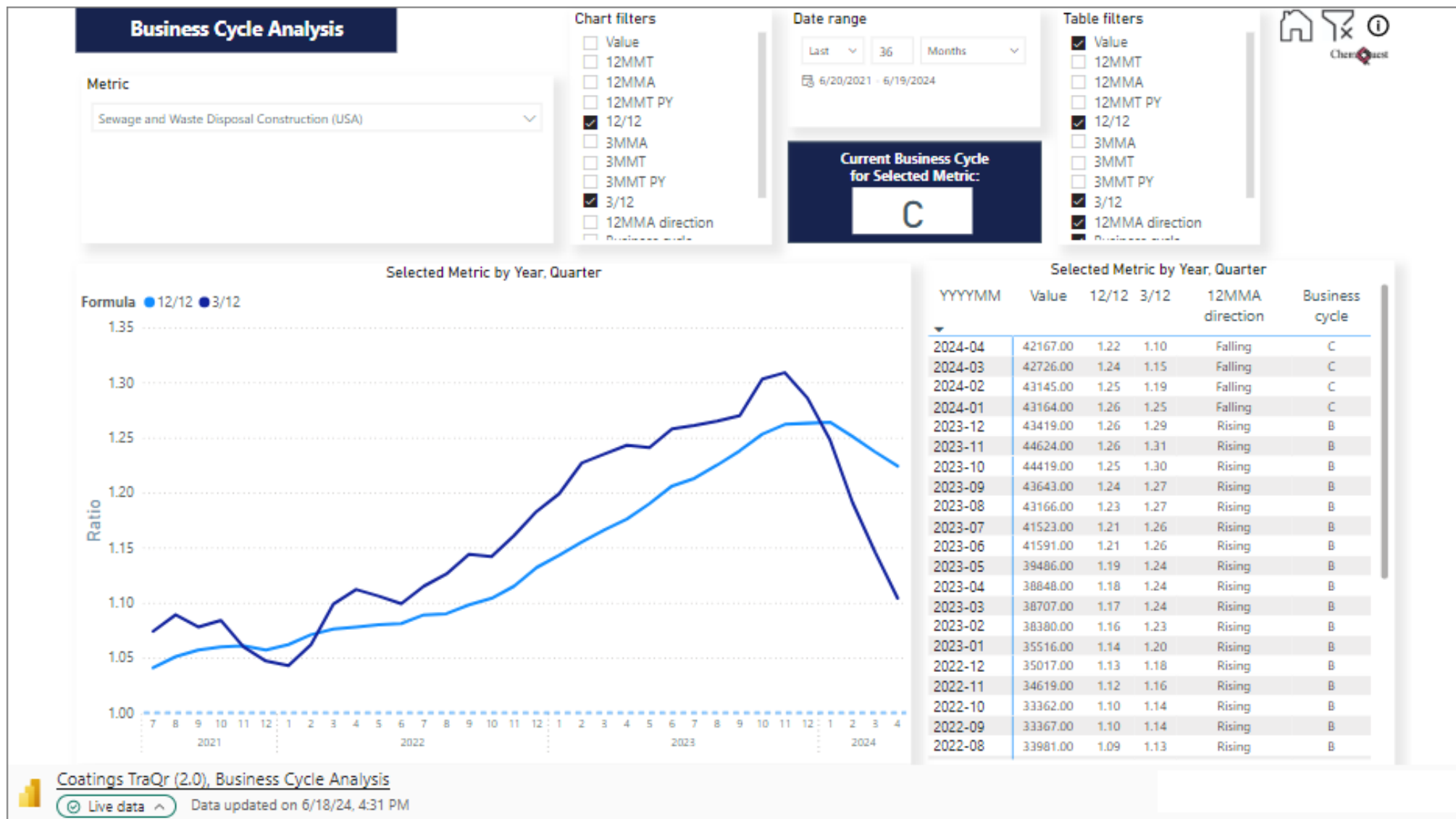
Correlation Coefficient:

0.89

Coatings Segment:

Construction

Sewage and Waste Disposal Construction expenditures peak in late 2023, now sharply decline to Phase C of business cycle.



Sewage and Waste Disposal Construction (USA)

Business Phase:



Business Cycle Trend:



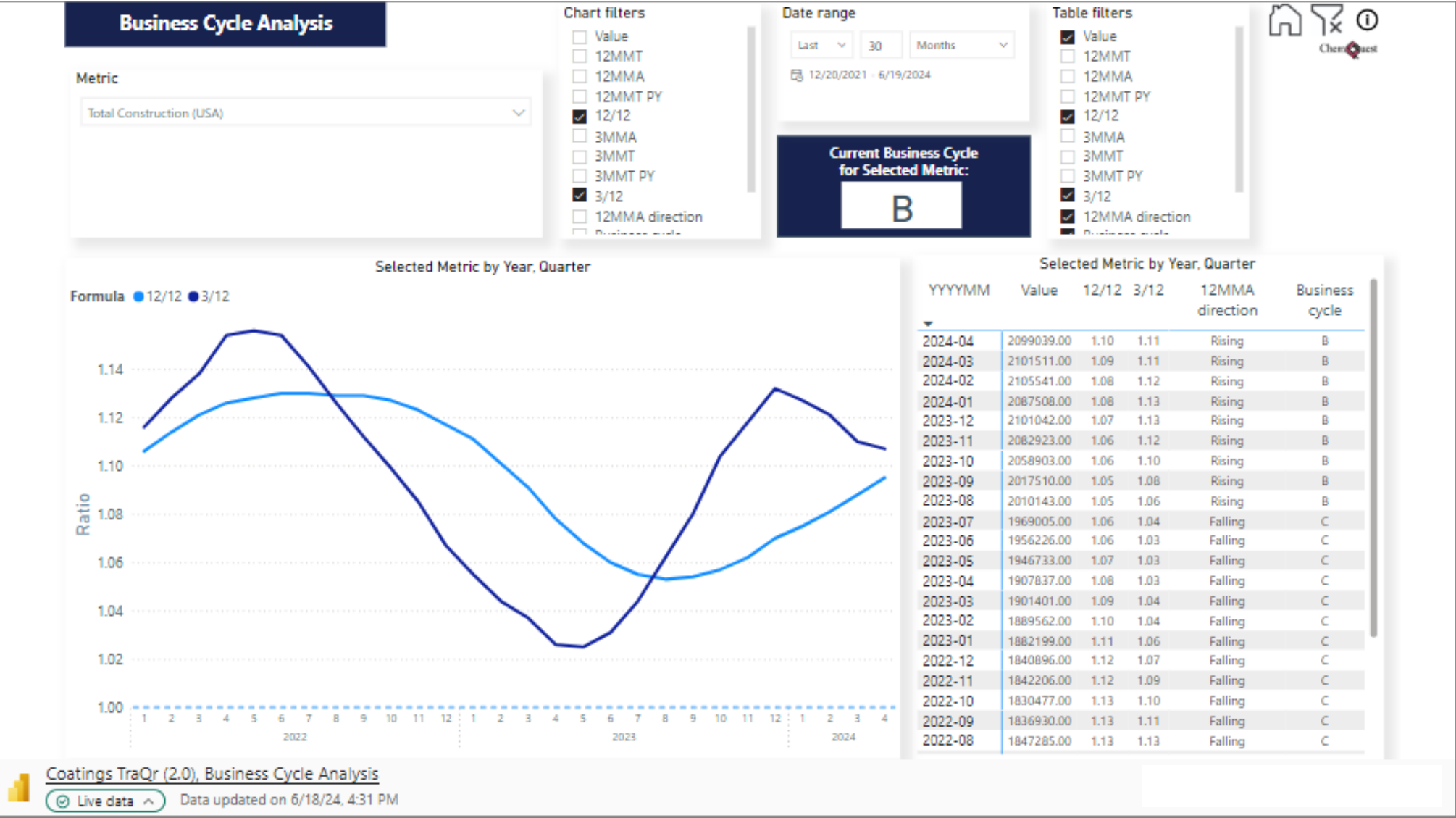
Correlation Coefficient:

0.85

Coatings Segment:


Construction

Total Construction in the US has rebounded since last July, with the 3/12 and 12/12 lines crossing, indicating consecutive months of advancing growth in phase B. However, we should monitor for a convergence.




Total Construction (USA)

Business Phase:



Business Cycle Trend:



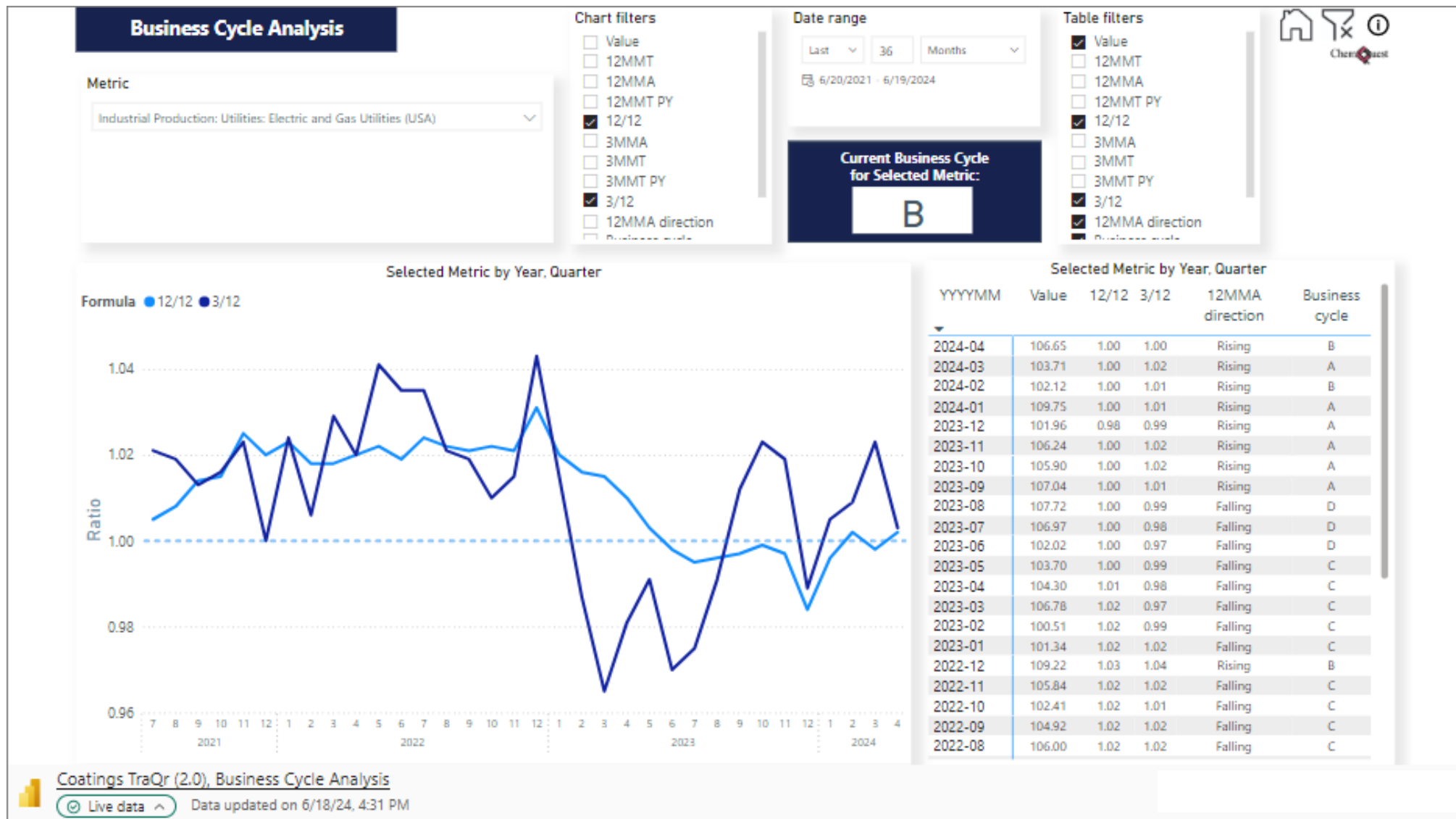
Correlation Coefficient:

0.84

Coatings Segment:

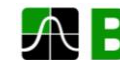
Construction

Electric and Gas Utilities in Industrial Production have shown significant volatility. Both the 3/12 and 12/12 lines extremely close to crossing again. Close monitoring is advised.



Industrial Production: Utilities: Electric and Gas Utilities

Business Phase:



Business Cycle Trend:



Correlation Coefficient:

0.76

Coatings Segment:

Utilities

Economic Index: Recent transition to Advancement phase.



Economic Index (USA)

Business Phase:



Business Cycle Trend:



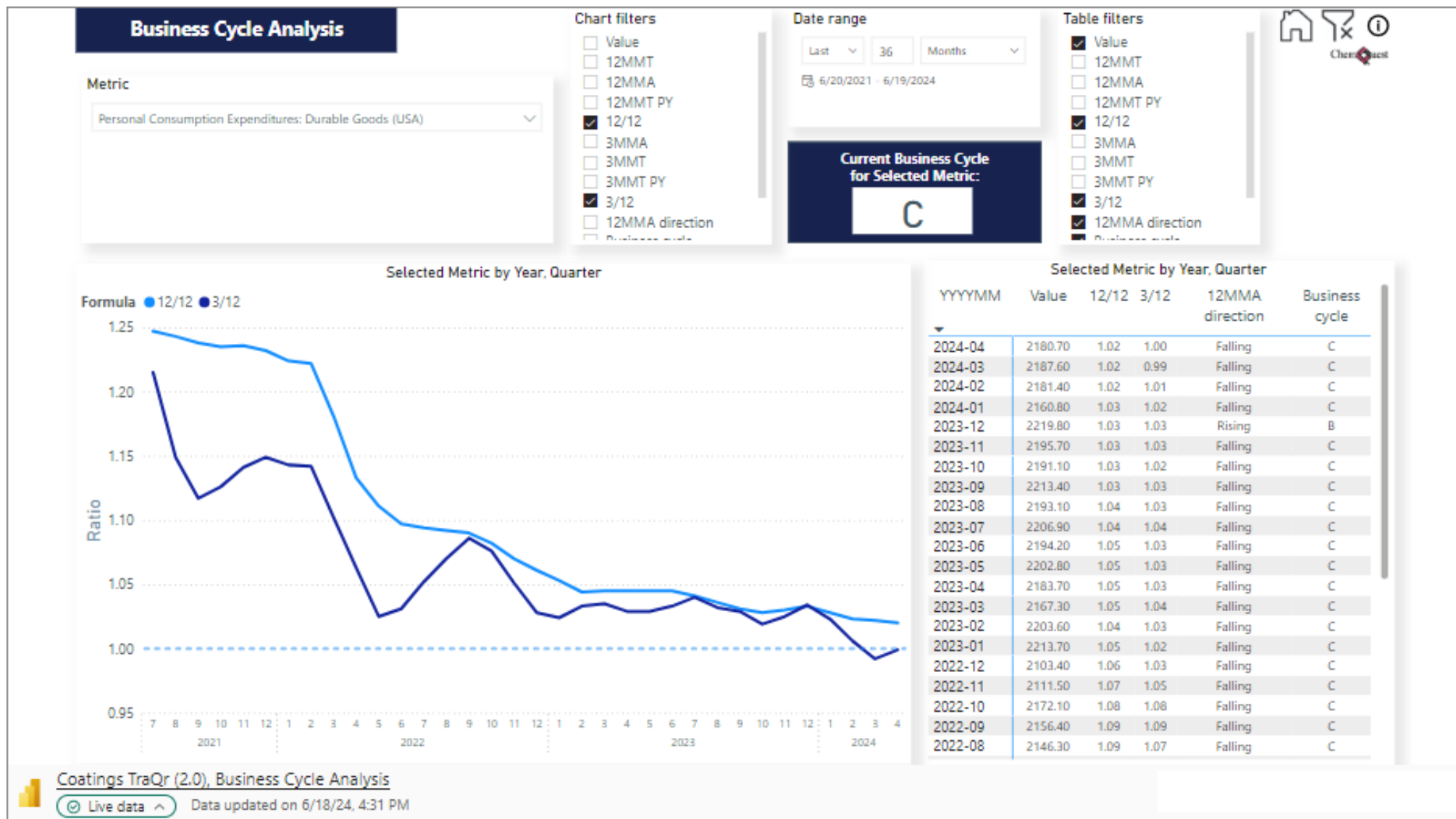
Correlation Coefficient:

0.94

Coatings Segment:

Other

Durable goods expenditure on long-term decline.



Personal Consumption Expenditures: Durable Goods (USA)

Business Phase:



Business Cycle Trend:



Correlation Coefficient:

0.92

Coatings Segment:

Other

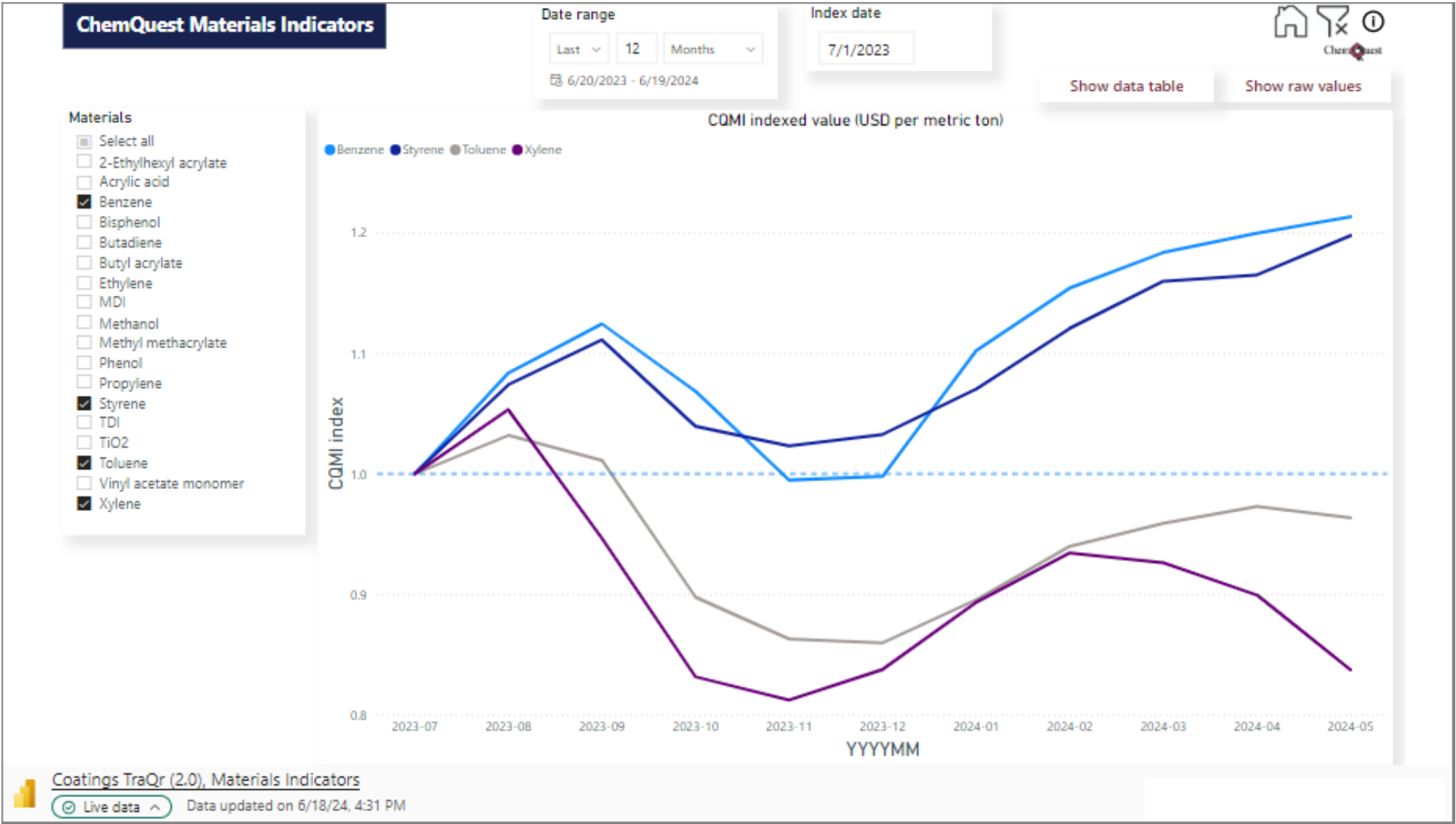
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Relevant Materials Indicators

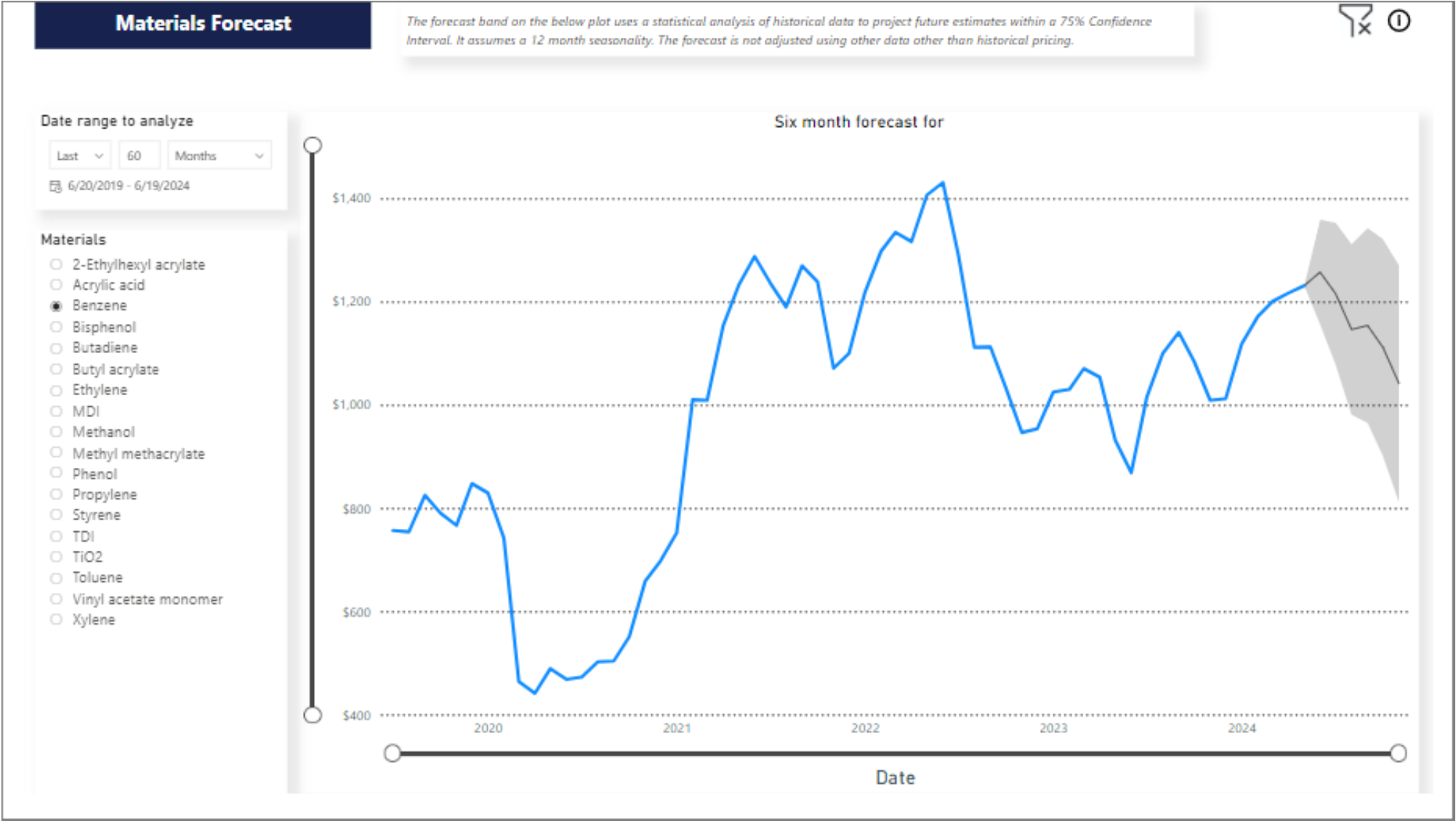
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Solvents, Last 36 Months Performance



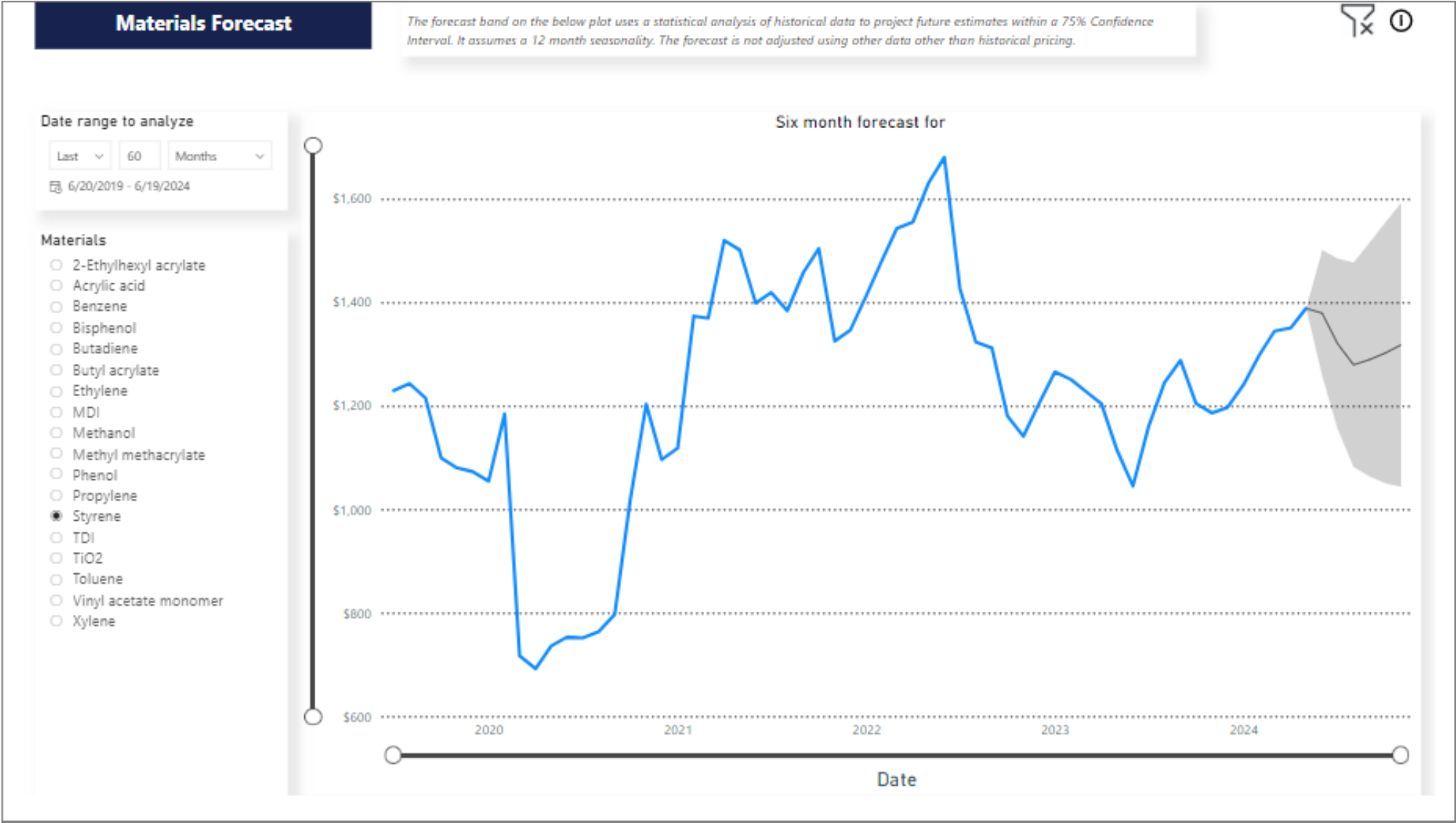
Solvents: Benzene, 6-Month Forecast



NOTE:

- To maintain a 75% confidence level over time, the spread will gradually increase.

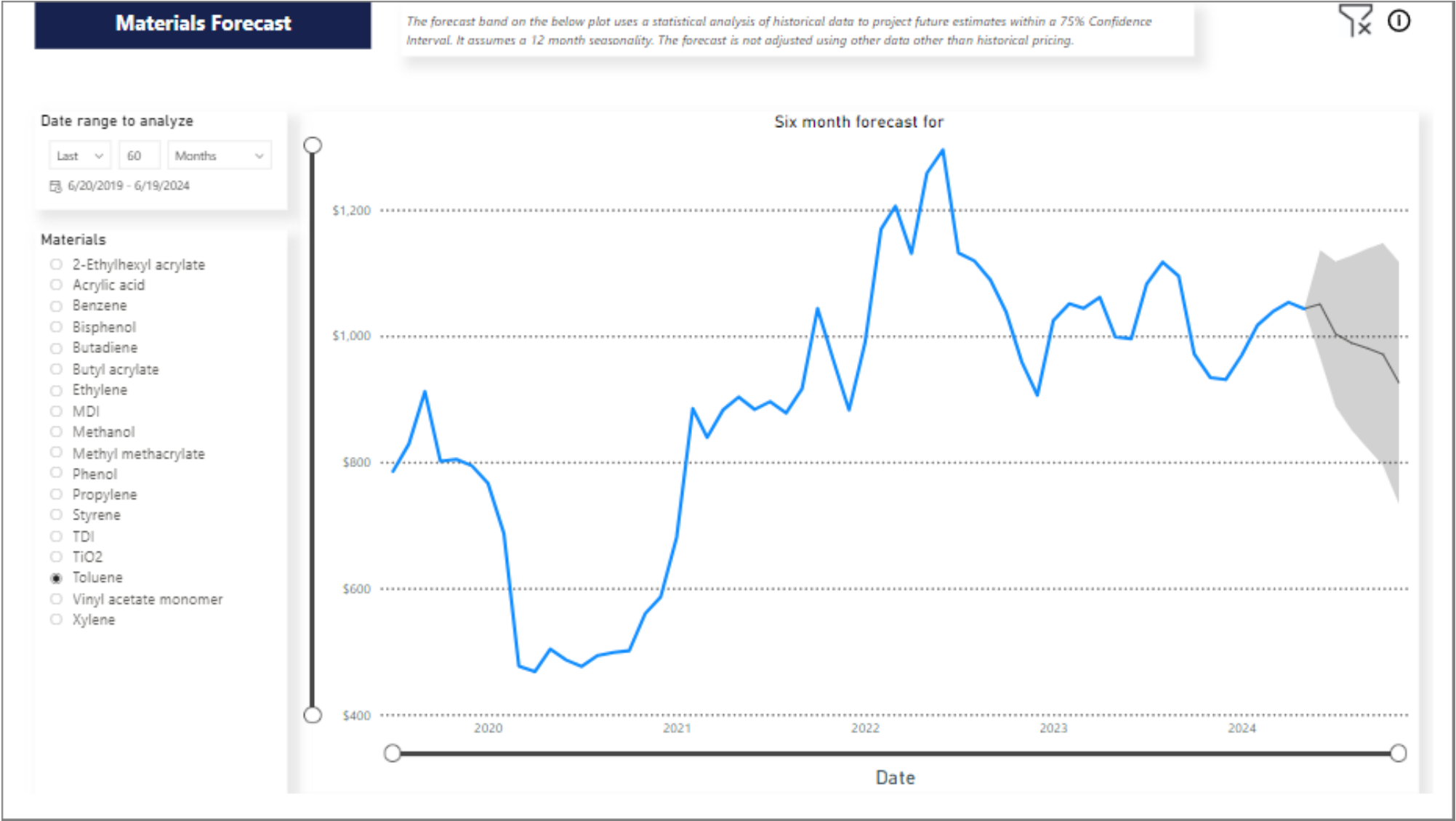
Solvents: Styrene, 6-Month Forecast



NOTE:

- To maintain a 75% confidence level over time, the spread will gradually increase.

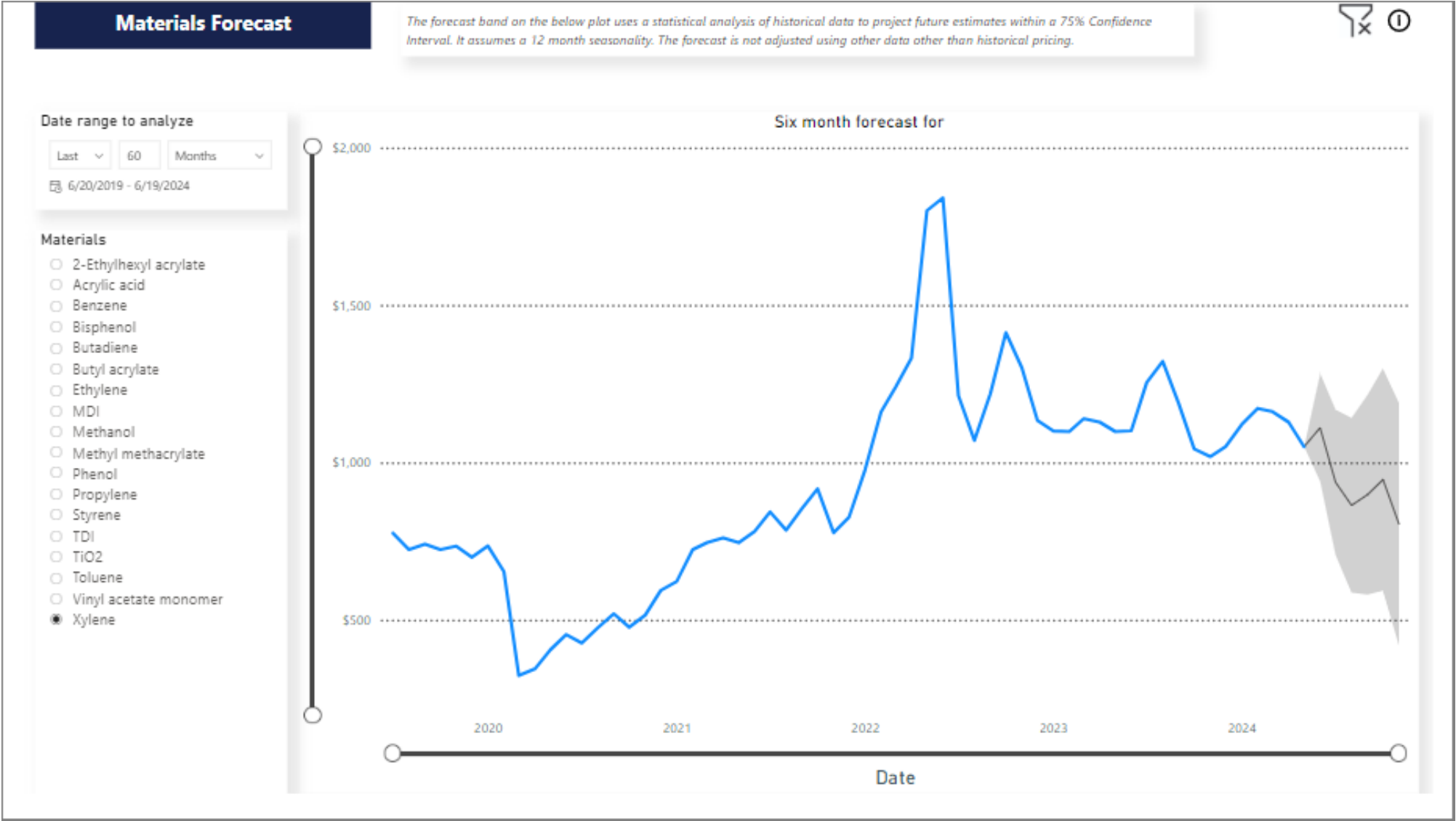
Solvents: Toluene, 6-Month Forecast



NOTE:

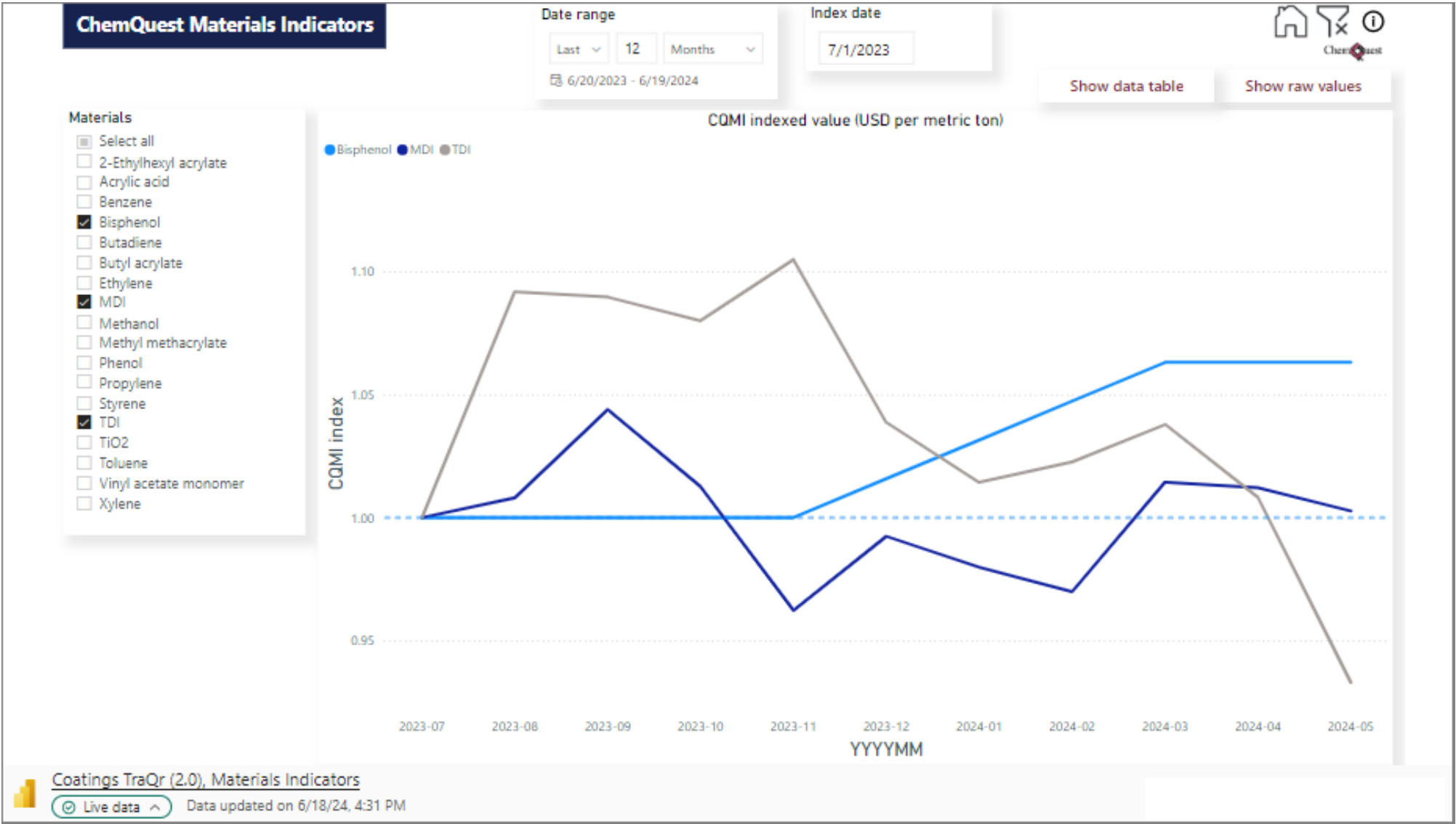
- To maintain a 75% confidence level over time, the spread will gradually increase.

Solvents: Xylene, 6-Month Forecast

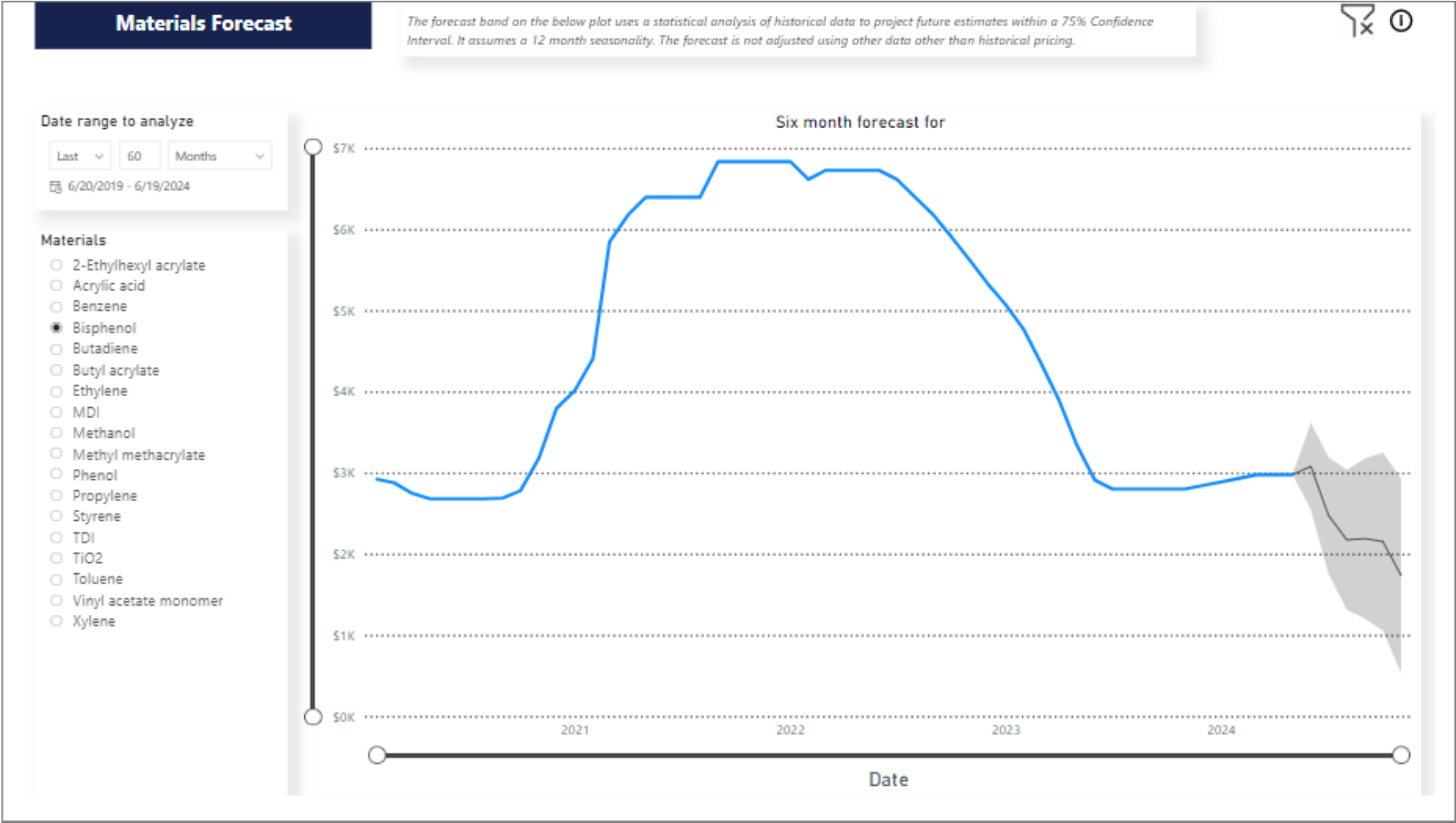


NOTE:
• To maintain a 75% confidence level over time, the spread will gradually increase.

Resins, Last 36 Months Performance



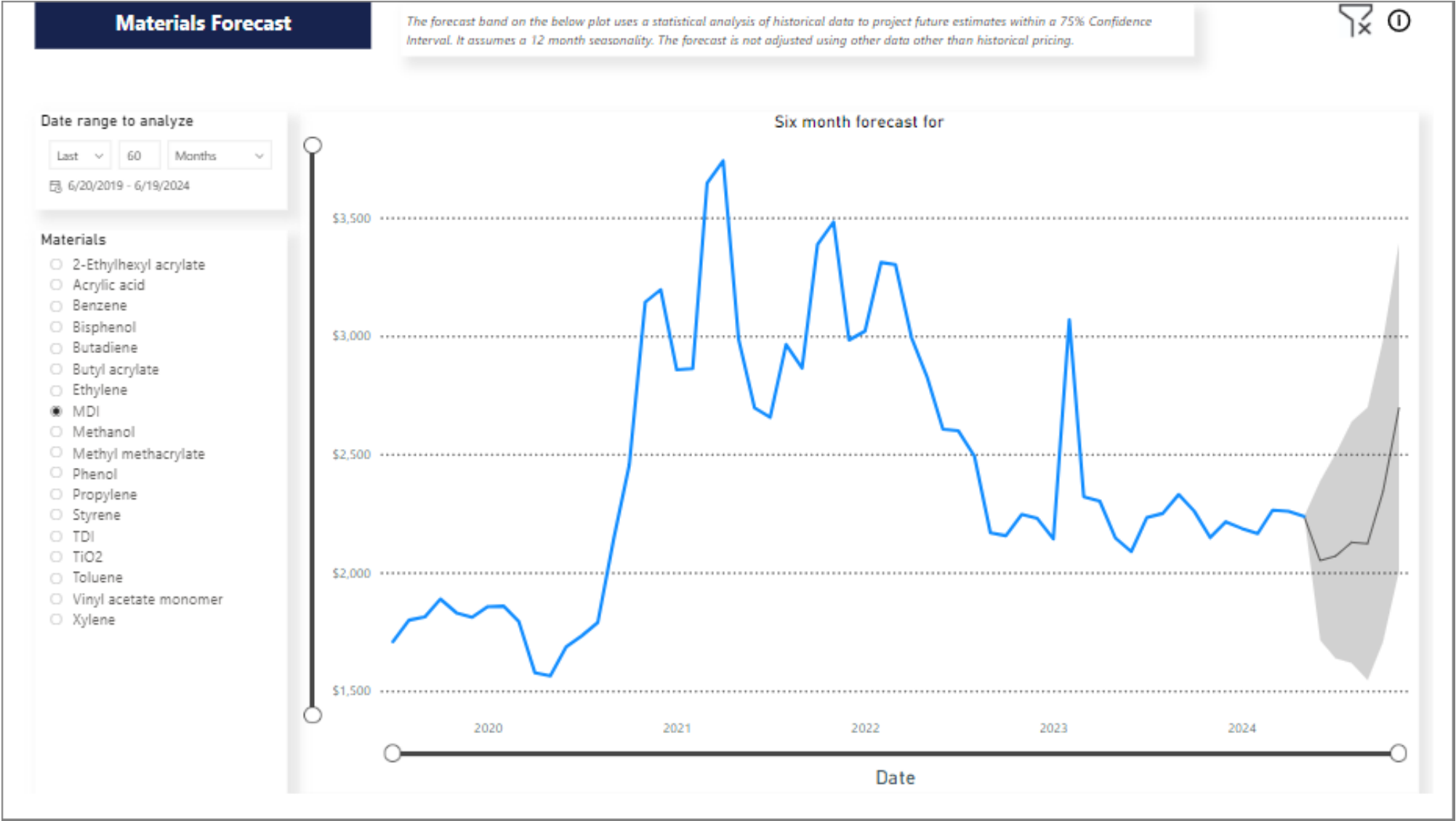
Resins: Bisphenol, 6-Month Forecast



NOTE:

- To maintain a 75% confidence level over time, the spread will gradually increase.

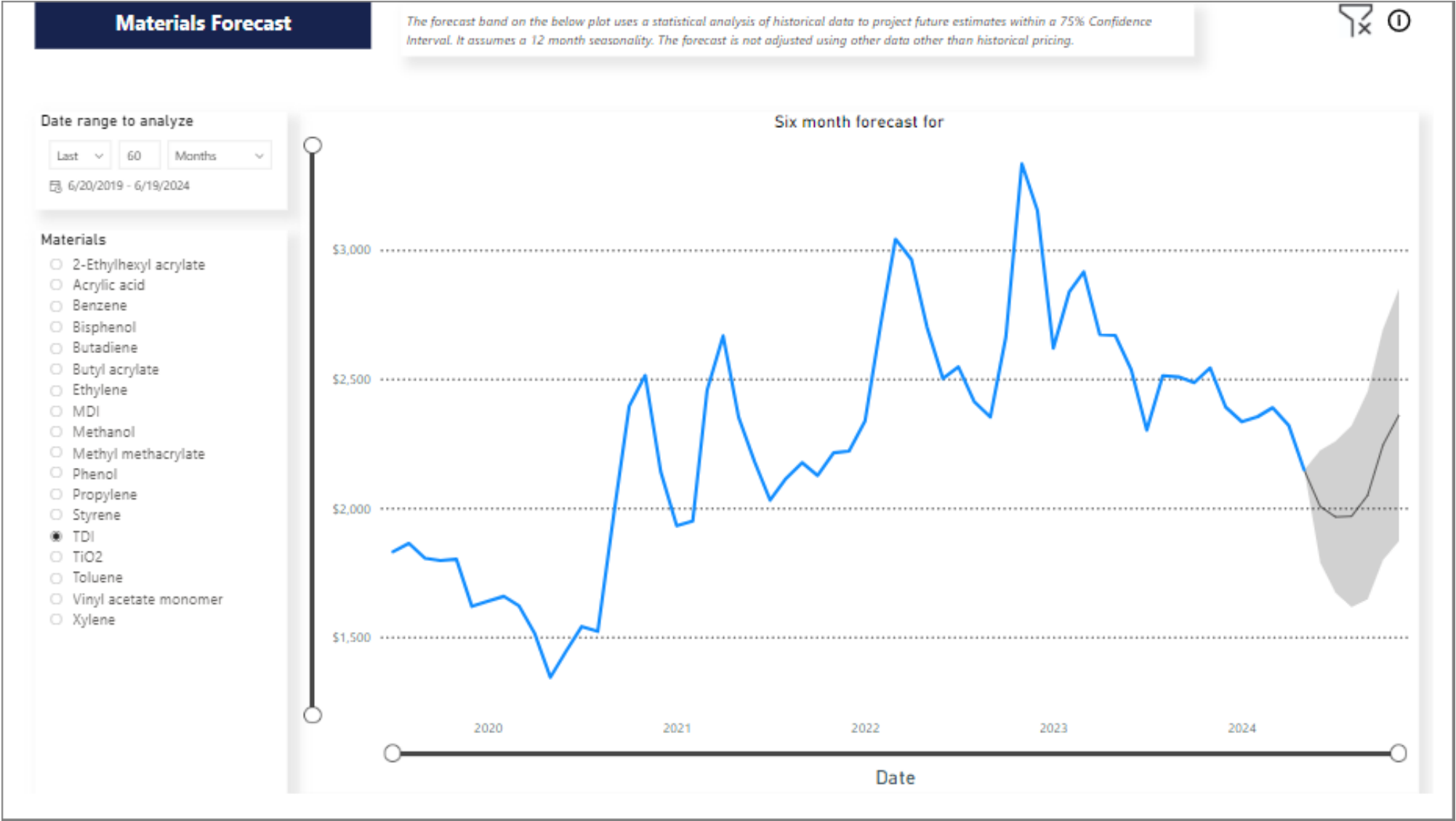
Resins: MDI, 6-Month Forecast



NOTE:

- To maintain a 75% confidence level over time, the spread will gradually increase.

Resins: TDI, 6-Month Forecast



NOTE:

- To maintain a 75% confidence level over time, the spread will gradually increase.



Rich Gibson, Director
The ChemQuest Group
rgibson@chemquest.com

Deep Industry Knowledge – Extensive Industry Relationships – Decades of Industry Experience

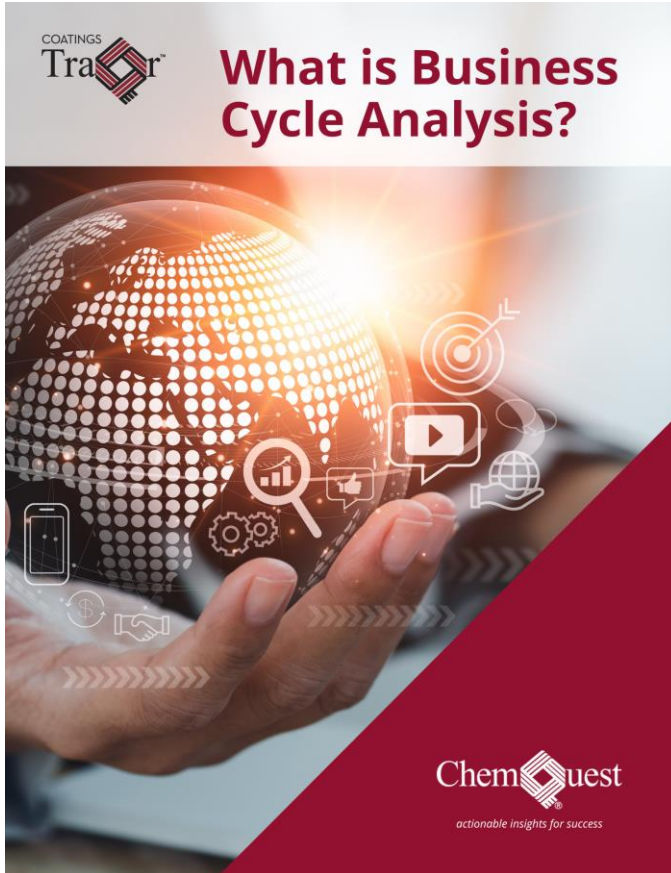
<https://chemquest.com>

<https://chemquest.com/traqr>

06

Reference Materials

What is Business Cycle Analysis?



Business Cycle Analysis is a tool that enables you to track indicators within the business cycle in order to assess the economy, identify trends, and capitalize on emerging opportunities. This provides a competitive edge by helping you make informed strategic decisions ahead of your competitors.

How can Business Cycle Analysis help you stay ahead of the curve, drive your business forward, and achieve your strategic objectives?

[Download the White Paper](#)

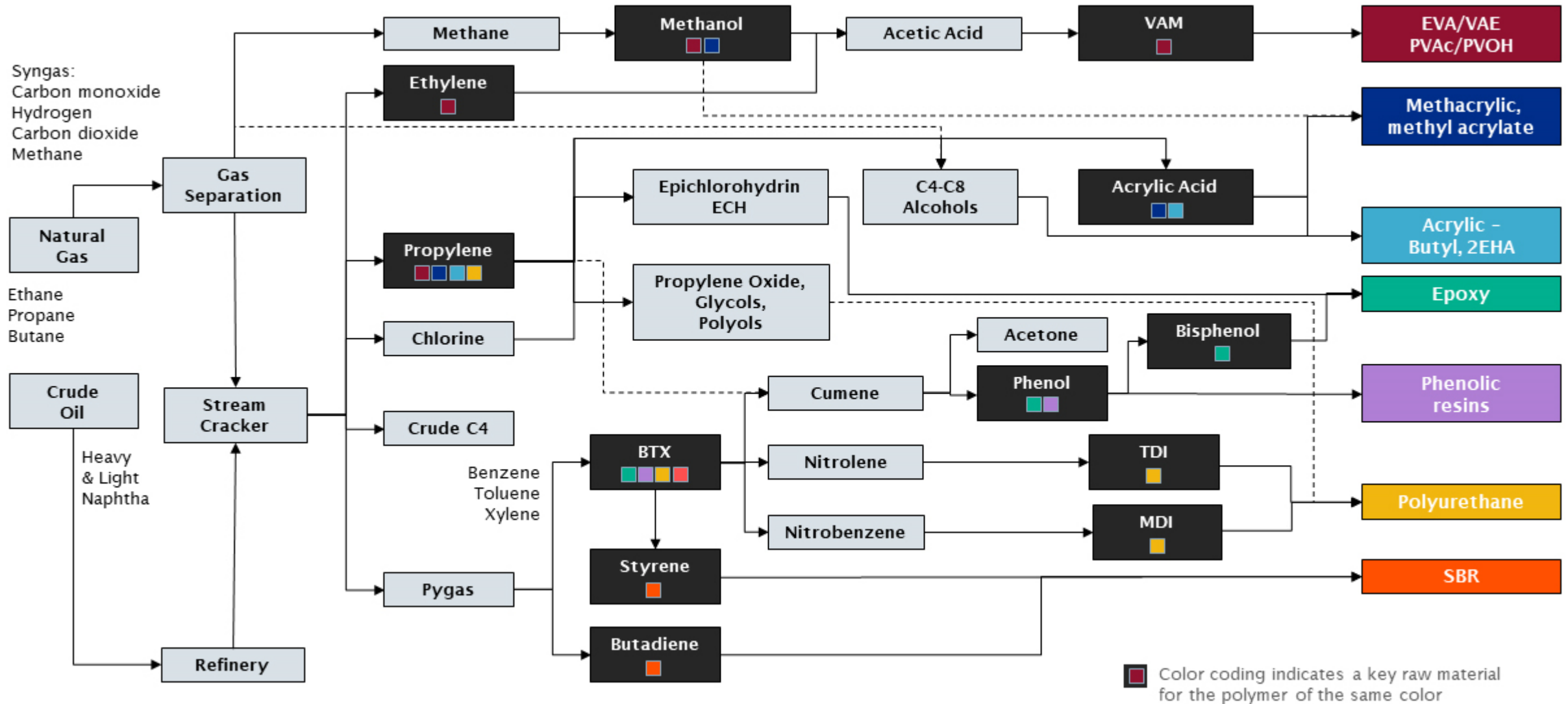
Watch the Webinar:

[Harnessing the Power of Business Cycle Analysis](#)

Understanding 12/12 and 3/12

- The fundamental unit of Business Cycle Analysis is the 12/12 ratio, which is an indicator's 12-month moving average compared to the preceding 12 months. Business Cycle Analysis ratios these numbers and plots them so we can understand what phase of the cycle the indicator is in.
- If the 12/12 is less than one (1.0), the indicator is down year on year, but the rate of decline is slowing (i.e., it's moving less). This represents phase A (Advancing). When seeing an indicator in phase A, you can make certain kinds of business decisions that are appropriate when gearing up for growth (e.g., taking on new staff, building inventory, and locking in supplier prices).
- Once the 12/12 goes above one (1.0), the indicator is up year on year and has entered phase B (Best). In this phase, the most recent 12 months is greater than the 12 months prior, and the rate of growth is increasing. This knowledge enables you to make business decisions that are appropriate for a growth phase.
- When that indicator's 12/12 peaks, and growth starts slowing, it is in phase C (Cautionary). You will want to be aware of this slowdown and potentially make business decisions that reflect this cautious stage.
- Once the 12/12 is less than one (1.0), the indicator is down year on year, meaning it is in a phase of decline. If that rate of decline is increasing, it's in phase D (Depressionary), so you may consider actions such as reducing inventories or putting a hold on hiring.
- How does Business Cycle Analysis establish these inflection points? How does it determine when the 12/12 stops increasing and begins decreasing or, conversely, when it stops decreasing and is now increasing?
- Key to this determination is a ratio called 3/12, which is calculated by looking at the average of the most recent three-month moving average (instead of 12). Since it covers a shorter time span, the 3/12 is much more volatile than the 12/12 and serves as an earlier indication.
- When the 3/12 and the 12/12 lines cross each other on the Business Cycle Analysis plot, the indicator has passed an inflection point. This indicates that it has moved from one business cycle phase to another.

Raw Materials Feedstocks



Additional Resources

- If you require data not included in this monthly report, please don't hesitate to reach out to Rich Gibson at rgibson@chemquest.com.
- All data is taken from TraQr® Dashboard.
- TraQr® Dashboard is a subscription-based resource that provides comprehensive global market data along with insight into key raw materials, global economic indicators, and the unique tool of Business Cycle Analysis to allow forecasting of the markets that most influence specific businesses, whether serving the industry regionally or worldwide. Learn more at <https://chemquest.com/traqr>.

