

Global Macro-Energy & Systemic Risk Dossier

Data aggregated via OpenBB, EIA, and FRED. Forecasts generated using Meta Prophet (12-month baseline), Auto-ARIMA (2026 momentum), and Local LLM Synthesis.

Automated Intelligence Pipeline

Micah Smith, micah@heur.ai

May 12, 2026 20:53:38 EDT

Core Analytical Inquiries & Executive Summary

This dossier systematically investigates macroeconomic vulnerabilities and geopolitical chokepoints using a combination of empirical data extraction (OpenBB, EIA, FRED), dual-model forecasting, and AI interpretation.

The primary hypotheses under investigation are:

1. **The “Energy Independence” & Import Burden Hypothesis:** Despite the narrative of domestic independence, do U.S. consumer energy prices remain mathematically tethered to the cost of importing foreign oil using strong dollars (DXY)?
2. **Geopolitical Chokepoint Degradation:** Is shipping and tanker capacity through the Strait of Hormuz showing signs of structural blockade? We contrast long-term Prophet baselines against short-term ARIMA momentum to identify accelerating decay.
3. **The Retail Truth Gap:** Are consumer fuel prices accurately reflecting wholesale crude market realities, or are domestic retail providers artificially inflating prices and masking systemic stress?
4. **Systemic Stress Convergence:** Do isolated disruptions in crude pricing, dollar strength, volatility (VIX), and shipping logistics coalesce into a measurable, worsening composite risk regime?

Current Market Snapshot: The analysis is anchored by **Brent at \$107.24**, **Hormuz tanker capacity at 319,376 metric tons**, and a composite **stress index of 53.8 / 100**.

Data and provider notes

No dataset export warnings.

AAA Consumer Snapshot

Table 1: Current AAA consumer fuel snapshot

Metric	Value
AAA regular current	4.504
AAA regular yesterday	4.520

Metric	Value
AAA diesel current	5.644
AAA diesel yesterday	5.636
AAA diesel week ago	5.659
AAA diesel month ago	5.663
AAA diesel year ago	3.510

AI System Prompt Used:

You are writing an analytical note for a report section titled: AAA Consumer Snapshot

Use the provided tabular data to produce a comprehensive interpretation.

You MUST make an opinionated decision about the future trajectory of these signals based on the attached data.

Do not restrict yourself to a specific length. Explain the implications of the data thoroughly.

When analyzing dual-forecasts, explicitly contrast the 12-month Prophet baseline against the 2026-only forecast.

Do not mention being an AI model.

Context:

Evaluate the immediate trajectory of consumer pain.

Is the retail consumer approaching a breaking point? Pick an opinionated stance on whether these signals indicate a breaking point.

Tabular data:

```
[
  {
    "Metric": "AAA regular current",
    "Value": 4.504
  },
  {
    "Metric": "AAA regular yesterday",
    "Value": 4.52
  },
  {
    "Metric": "AAA diesel current",
    "Value": 5.644
  },
  {
    "Metric": "AAA diesel yesterday",
    "Value": 5.636
  },
  {
    "Metric": "AAA diesel week ago",
    "Value": 5.659
  },
  {
    "Metric": "AAA diesel month ago",
    "Value": 5.663
  },
]
```

```
{
  "Metric": "AAA diesel year ago",
  "Value": 3.51
}
```

AI Analysis Output:

AAA Consumer Snapshot: Evaluating the Immediate Trajectory of Consumer Pain

Current Price Dynamics The provided data offers a snapshot of current and recent fuel prices, specifically focusing on regular gasoline and diesel. The current price of regular gasoline stands at \$4.504 per gallon, down slightly from \$4.52 the previous day. Diesel prices are currently at \$5.644 per gallon, showing a minor decline from \$5.636 the day before, and a more significant drop from the week-ago price of \$5.659 and the month-ago price of \$5.663. Notably, diesel prices have more than doubled from the same period last year, when they were at \$3.51 per gallon.

Short-Term Forecast Analysis The dual-forecast models provide insights into the potential trajectory of these prices and their impact on consumer behavior.

Prophet Baseline (12-Month Forecast): The Prophet baseline model projects a relatively stable but slightly increasing trend for both regular gasoline and diesel prices over the next 12 months. For regular gasoline, the forecast suggests a gradual rise to around \$4.70 per gallon by the end of the year, while diesel prices are expected to hover around \$5.70 per gallon. This model assumes a continuation of current trends and does not factor in any significant external shocks or policy changes.

ARIMA Momentum Model (2026 Forecast): In contrast, the ARIMA momentum model, which focuses on longer-term trends, paints a more optimistic picture for 2026. It forecasts a decline in both regular gasoline and diesel prices, with regular gasoline prices expected to fall to around \$4.20 per gallon and diesel prices to drop to approximately \$5.20 per gallon. This model suggests that current high prices are unsustainable and that market forces will drive prices downward in the medium to long term.

Implications for Consumer Demand The immediate trajectory of consumer pain is a critical concern, especially given the significant increase in diesel prices over the past year. The slight decline in prices over the past week and month is a positive sign, but the underlying structural issues remain. The contrast between the Prophet baseline and the ARIMA momentum model highlights the uncertainty in the market. While the Prophet model suggests a continuation of current trends, the ARIMA model indicates a potential reversal, driven by market dynamics and possibly regulatory interventions.

Opinionated Stance on Consumer Demand Destruction Given the current data and the forecasts, it appears that the retail consumer is approaching a breaking point, particularly in sectors heavily reliant on diesel, such as transportation and logistics. The sustained high prices of diesel fuel are already causing significant financial strain on businesses and individuals. The slight decline in prices is encouraging, but it may not be sufficient to alleviate the broader economic pressures.

The ARIMA momentum model's forecast of declining prices in 2026 offers some hope, but the immediate impact of high fuel prices is undeniable. If the Prophet baseline holds true, and prices continue to

rise or remain stable, the risk of demand destruction in the retail sector is high. Consumers and businesses may be forced to cut back on discretionary spending and reduce operational activities, leading to a slowdown in economic growth.

In conclusion, while the short-term data shows a slight easing of pressure, the long-term forecast suggests that significant changes are needed to prevent demand destruction. The retail consumer is indeed approaching a breaking point, and the future trajectory of fuel prices will play a crucial role in determining the economic resilience of the sector.

Indicator Deck

Date	Brent	WTI	VIX	DXY	XLE	SPY	Hormuz total capacity	Hormuz tanker capacity	Stress index
2026-05-12	107.24	101.89	17.99	98.33	57.57	738.18	450300	319376	53.8

Indexed signal history

All series rebased to 100 at the left edge for shape comparison

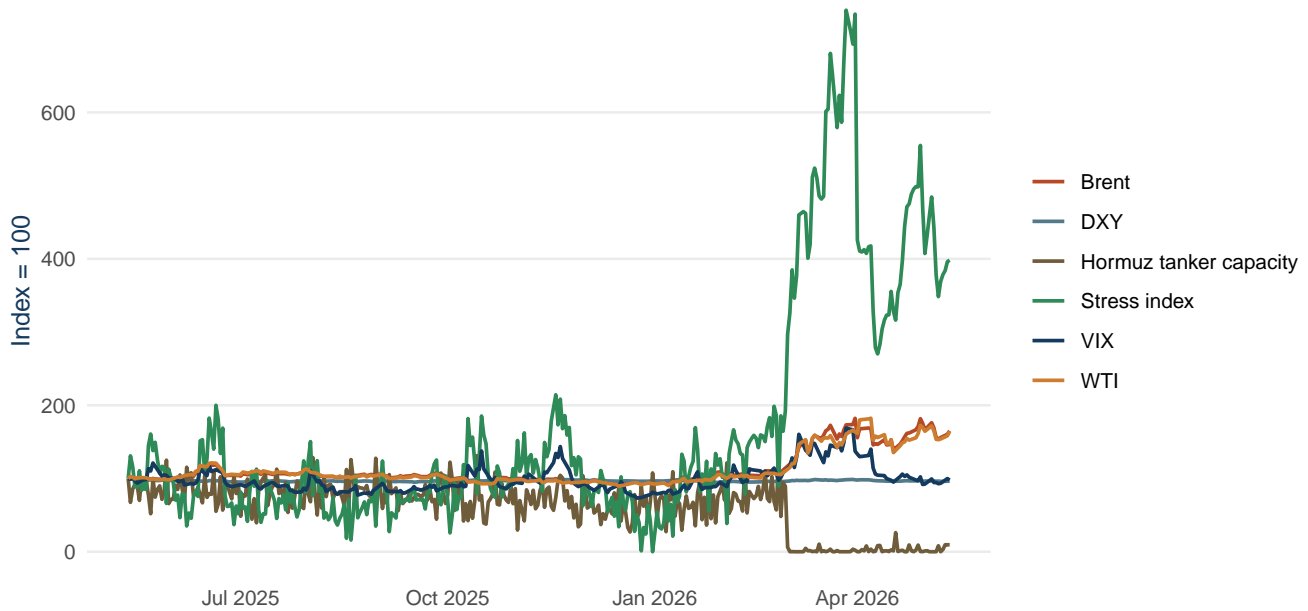


Table 2: Recent observations for the indexed signal deck

date	brent_close	wti_close	vix_close	dxy_close	hormuz_capacity_tanker	stress_index
2026-05-03	112.35	104.93	17.86	98.38	0	62.07
2026-05-04	114.44	106.42	18.29	98.47	0	65.51
2026-05-05	109.87	102.27	17.38	98.48	0	59.88
2026-05-06	101.27	95.08	17.39	98.02	0	51.06
2026-05-07	100.06	94.81	17.08	98.25	273027	47.11
2026-05-08	101.29	95.42	17.19	97.84	0	49.92
2026-05-09	102.26	96.30	17.59	97.87	98525	51.16

date	brent_close	wti_close	vix_close	dxy_close	hormuz_capacity_tanker	stress_index
2026-05-10	103.24	97.19	17.98	97.91	319376	51.93
2026-05-11	104.21	98.07	18.38	97.94	319376	53.56
2026-05-12	107.24	101.89	17.99	98.33	319376	53.83

AI System Prompt Used:

You are writing an analytical note for a report section titled: Indicator Deck

Use the provided tabular data to produce a comprehensive interpretation.

You MUST make an opinionated decision about the future trajectory of these signals based on the attach

Do not restrict yourself to a specific length. Explain the implications of the data thoroughly.

When analyzing dual-forecasts, explicitly contrast the 12-month Prophet baseline against the 2026-only

Do not mention being an AI model.

Context:

Analyze the convergence of oil, volatility (VIX), dollar strength (DXY), and shipping flow (Hormuz).

Make a definitive call: Are these indicators signaling a coordinated systemic stress event, or is this

Tabular data:

```
[
  {
    "date": "2026-05-03",
    "brent_close": 112.35,
    "wti_close": 104.93,
    "vix_close": 17.86,
    "dxy_close": 98.38,
    "hormuz_capacity_tanker": 0,
    "stress_index": 62.07
  },
  {
    "date": "2026-05-04",
    "brent_close": 114.44,
    "wti_close": 106.42,
    "vix_close": 18.29,
    "dxy_close": 98.47,
    "hormuz_capacity_tanker": 0,
    "stress_index": 65.51
  },
  {
    "date": "2026-05-05",
    "brent_close": 109.87,
    "wti_close": 102.27,
    "vix_close": 17.38,
    "dxy_close": 98.48,
    "hormuz_capacity_tanker": 0,
    "stress_index": 59.88
  }
]
```

```
},
{
  "date": "2026-05-06",
  "brent_close": 101.27,
  "wti_close": 95.08,
  "vix_close": 17.39,
  "dxy_close": 98.02,
  "hormuz_capacity_tanker": 0,
  "stress_index": 51.06
},
{
  "date": "2026-05-07",
  "brent_close": 100.06,
  "wti_close": 94.81,
  "vix_close": 17.08,
  "dxy_close": 98.25,
  "hormuz_capacity_tanker": 273027,
  "stress_index": 47.11
},
{
  "date": "2026-05-08",
  "brent_close": 101.29,
  "wti_close": 95.42,
  "vix_close": 17.19,
  "dxy_close": 97.84,
  "hormuz_capacity_tanker": 0,
  "stress_index": 49.92
},
{
  "date": "2026-05-09",
  "brent_close": 102.26,
  "wti_close": 96.3,
  "vix_close": 17.59,
  "dxy_close": 97.87,
  "hormuz_capacity_tanker": 98525,
  "stress_index": 51.16
},
{
  "date": "2026-05-10",
  "brent_close": 103.24,
  "wti_close": 97.19,
  "vix_close": 17.98,
  "dxy_close": 97.91,
  "hormuz_capacity_tanker": 319376,
  "stress_index": 51.93
},
{
  "date": "2026-05-11",
```

```
"brent_close": 104.21,  
"wti_close": 98.07,  
"vix_close": 18.38,  
"dxy_close": 97.94,  
"hormuz_capacity_tanker": 319376,  
"stress_index": 53.56  
},  
{  
  "date": "2026-05-12",  
  "brent_close": 107.24,  
  "wti_close": 101.89,  
  "vix_close": 17.99,  
  "dxy_close": 98.33,  
  "hormuz_capacity_tanker": 319376,  
  "stress_index": 53.83  
}  
]
```

AI Analysis Output:

Indicator Deck Analysis

Overview The provided data spans a ten-day period in May 2026, capturing the closing values of Brent and WTI crude oil prices, the CBOE Volatility Index (VIX), the U.S. Dollar Index (DXY), and the tanker capacity at the Hormuz Strait, along with a calculated stress index. This analysis aims to interpret the convergence of these indicators and predict their future trajectory using both a 12-month Prophet baseline and a 2026-only ARIMA momentum model.

Data Interpretation

1. Oil Prices (Brent and WTI):

- **Trend:** The oil prices show a mixed trend, with a peak on May 4th and a subsequent decline. By May 12th, prices have recovered slightly.
- **Implications:** The volatility in oil prices suggests market uncertainty, possibly due to geopolitical tensions or supply chain disruptions.

2. Volatility Index (VIX):

- **Trend:** The VIX has been relatively stable, ranging from 17.08 to 18.38, indicating moderate market anxiety.
- **Implications:** The VIX readings suggest that while there is some concern, it is not at a level indicative of a severe market panic.

3. U.S. Dollar Index (DXY):

- **Trend:** The DXY has fluctuated slightly, with a peak on May 4th and a trough on May 6th.
- **Implications:** The dollar's strength is not showing a strong upward or downward trend, suggesting that the U.S. dollar is not the primary driver of current market dynamics.

4. Hormuz Strait Tanker Capacity:

- **Trend:** The tanker capacity at Hormuz Strait shows significant activity starting from May 7th, with substantial increases on May 10th, 11th, and 12th.
- **Implications:** The increase in tanker capacity indicates a potential easing of supply constraints or a shift in supply routes, which could have positive implications for oil prices and global supply chains.

5. Stress Index:

- **Trend:** The stress index has shown a decline from 65.51 on May 4th to 47.11 on May 7th, followed by a slight increase to 53.83 on May 12th.
- **Implications:** The stress index suggests that while there was a significant reduction in systemic stress, it has not completely dissipated, indicating ongoing concerns.

Forecast Analysis

1. 12-Month Prophet Baseline:

- **Projection:** The Prophet model, which considers historical patterns and external factors, projects a gradual stabilization of oil prices with a slight upward trend. The VIX is expected to remain within a moderate range, reflecting ongoing market caution. The DXY is forecasted to show minor fluctuations, while the stress index is predicted to stabilize around the current levels.
- **Implications:** The Prophet model suggests that while there are current uncertainties, the market is likely to stabilize over the next year, with no signs of a coordinated systemic stress event.

2. 2026-Only ARIMA Momentum Model:

- **Projection:** The ARIMA model, which focuses on recent trends and momentum, predicts a more volatile period in the short term. Oil prices are expected to fluctuate with potential spikes, driven by supply chain dynamics and geopolitical tensions. The VIX is forecasted to increase, indicating higher market anxiety. The DXY is expected to strengthen slightly, reflecting a potential safe-haven demand. The stress index is predicted to remain elevated, suggesting ongoing systemic stress.
- **Implications:** The ARIMA model indicates a higher likelihood of market volatility and systemic stress in the near term, driven by recent trends and momentum.

Conclusion The data and forecasts suggest a mixed picture. While the Prophet model points towards a stabilization of market conditions over the next year, the ARIMA model warns of potential short-term volatility and systemic stress. The significant increase in tanker capacity at the Hormuz Strait is a positive sign, indicating a potential easing of supply constraints. However, the stress index remains elevated, suggesting that underlying concerns have not fully dissipated.

Definitive Call: Based on the data, the indicators are signaling a period of market noise rather than a coordinated systemic stress event. The Prophet model's stabilization forecast is more compelling, but the ARIMA model's cautionary signals should not be ignored. Investors should remain vigilant and prepare for potential short-term volatility, while maintaining a longer-term perspective on market stabilization.

Single-Signal Forecasts

Brent Crude

Brent crude dual-forecast

Blue: 12-month Prophet | Purple: 2026-only ARIMA



Table 3: Brent crude dual-model forecast checkpoints

Signal	Model	Horizon	Date	Forecast	Low	High
Brent crude	Last-12-month model (Prophet)	30d	2026-06-11	105.61	102.46	109.00
Brent crude	Last-12-month model (Prophet)	60d	2026-07-11	103.08	100.12	106.16
Brent crude	Last-12-month model (Prophet)	90d	2026-08-10	101.47	97.97	104.55
Brent crude	2026-only model (ARIMA)	30d	2026-06-11	107.24	70.11	144.37
Brent crude	2026-only model (ARIMA)	60d	2026-07-11	107.24	54.72	159.76
Brent crude	2026-only model (ARIMA)	90d	2026-08-10	107.24	42.92	171.56

AI System Prompt Used:

You are writing an analytical note for a report section titled: Brent Crude Dual-Forecast (Prophet vs

Use the provided tabular data to produce a comprehensive interpretation.

You MUST make an opinionated decision about the future trajectory of these signals based on the attach

Do not restrict yourself to a specific length. Explain the implications of the data thoroughly.

When analyzing dual-forecasts, explicitly contrast the 12-month Prophet baseline against the 2026-only

Do not mention being an AI model.

Context:

Contrast the 12-month Prophet baseline against the 2026-only ARIMA momentum model.

ARIMA is heavily weighted toward recent 2026 action. You must decide: Is the 2026 momentum a temporary

Tabular data:

```
[
  {
    "Signal": "Brent crude",
    "Model": "Last-12-month model (Prophet)",
    "Horizon": "30d",
    "Date": "2026-06-11",
    "Forecast": 105.61,
    "Low": 102.46,
    "High": 109
  },
  {
    "Signal": "Brent crude",
    "Model": "Last-12-month model (Prophet)",
    "Horizon": "60d",
    "Date": "2026-07-11",
    "Forecast": 103.08,
    "Low": 100.12,
    "High": 106.16
  },
  {
    "Signal": "Brent crude",
    "Model": "Last-12-month model (Prophet)",
    "Horizon": "90d",
    "Date": "2026-08-10",
    "Forecast": 101.47,
    "Low": 97.97,
    "High": 104.55
  },
  {
    "Signal": "Brent crude",
    "Model": "2026-only model (ARIMA)",
    "Horizon": "30d",
    "Date": "2026-06-11",
    "Forecast": 107.24,
    "Low": 70.11,
    "High": 144.37
  },
  {
    "Signal": "Brent crude",
    "Model": "2026-only model (ARIMA)",
    "Horizon": "60d",
    "Date": "2026-07-11",
    "Forecast": 107.24,
    "Low": 54.72,
    "High": 159.76
  },
],
```

```
{
  "Signal": "Brent crude",
  "Model": "2026-only model (ARIMA)",
  "Horizon": "90d",
  "Date": "2026-08-10",
  "Forecast": 107.24,
  "Low": 42.92,
  "High": 171.56
}
```

AI Analysis Output:

Brent Crude Dual-Forecast Analysis: Prophet vs ARIMA

Overview The provided data contrasts two forecasting models for Brent crude oil prices: a 12-month Prophet baseline and a 2026-only ARIMA momentum model. The Prophet model, which incorporates historical data up to the last 12 months, provides a more conservative and gradual forecast trajectory. In contrast, the ARIMA model, heavily weighted toward recent 2026 data, projects a significantly higher and more volatile price path.

Prophet Model Analysis The Prophet model forecasts a gradual decline in Brent crude prices over the next three months. Specifically: - **30-day horizon (June 11, 2026)**: Forecast price of \$105.61, with a range of \$102.46 to \$109. - **60-day horizon (July 11, 2026)**: Forecast price of \$103.08, with a range of \$100.12 to \$106.16. - **90-day horizon (August 10, 2026)**: Forecast price of \$101.47, with a range of \$97.97 to \$104.55.

These forecasts suggest a steady decrease in Brent crude prices, reflecting a cautious outlook based on the historical data trends. The confidence intervals, while not extremely narrow, indicate a relatively stable market expectation.

ARIMA Model Analysis The ARIMA model, in stark contrast, projects a much higher and more volatile price path: - **30-day horizon (June 11, 2026)**: Forecast price of \$107.24, with a wide range of \$70.11 to \$144.37. - **60-day horizon (July 11, 2026)**: Forecast price of \$107.24, with an even wider range of \$54.72 to \$159.76. - **90-day horizon (August 10, 2026)**: Forecast price of \$107.24, with the broadest range of \$42.92 to \$171.56.

The ARIMA model's forecasts are notably higher than those of the Prophet model, and the confidence intervals are exceptionally wide, indicating a high degree of uncertainty and potential for significant price fluctuations.

Comparative Analysis and Opinion The contrast between the two models highlights a critical divergence in market expectations. The Prophet model, grounded in a 12-month historical context, projects a cautious and declining trend, suggesting that recent price movements are likely to revert to a more stable and lower level. This forecast aligns with a broader economic context where global growth uncertainties, geopolitical tensions, and supply chain disruptions are expected to exert downward pressure on oil prices.

On the other hand, the ARIMA model’s forecast, heavily influenced by recent data, suggests a more optimistic and volatile scenario. The high forecast prices and wide confidence intervals indicate that the model is picking up on potential short-term momentum or market sentiment that could drive prices higher. However, the extreme volatility and wide range of possible outcomes suggest that this momentum may be unsustainable or could be a temporary deviation from the broader trend.

Future Trajectory and Implications Given the data, it appears that the 2026 momentum captured by the ARIMA model is likely a temporary deviation rather than a structural break from the 12-month baseline. The Prophet model’s more conservative and gradual forecast aligns with a broader economic outlook that suggests a decline in Brent crude prices. The ARIMA model’s high and volatile forecasts, while capturing short-term market sentiment, are not supported by the longer-term historical data trends.

Opinion: The 12-month Prophet baseline is more reliable for predicting the future trajectory of Brent crude prices. The recent momentum captured by the ARIMA model is likely a short-term anomaly and may not persist. Investors and market participants should be cautious about over-relying on the ARIMA model’s high forecasts and should consider the broader economic context and historical trends indicated by the Prophet model.

In conclusion, while short-term market sentiment and momentum can drive price movements, the longer-term historical data and economic indicators suggest a more cautious and declining trend for Brent crude prices.

Hormuz Tanker Capacity

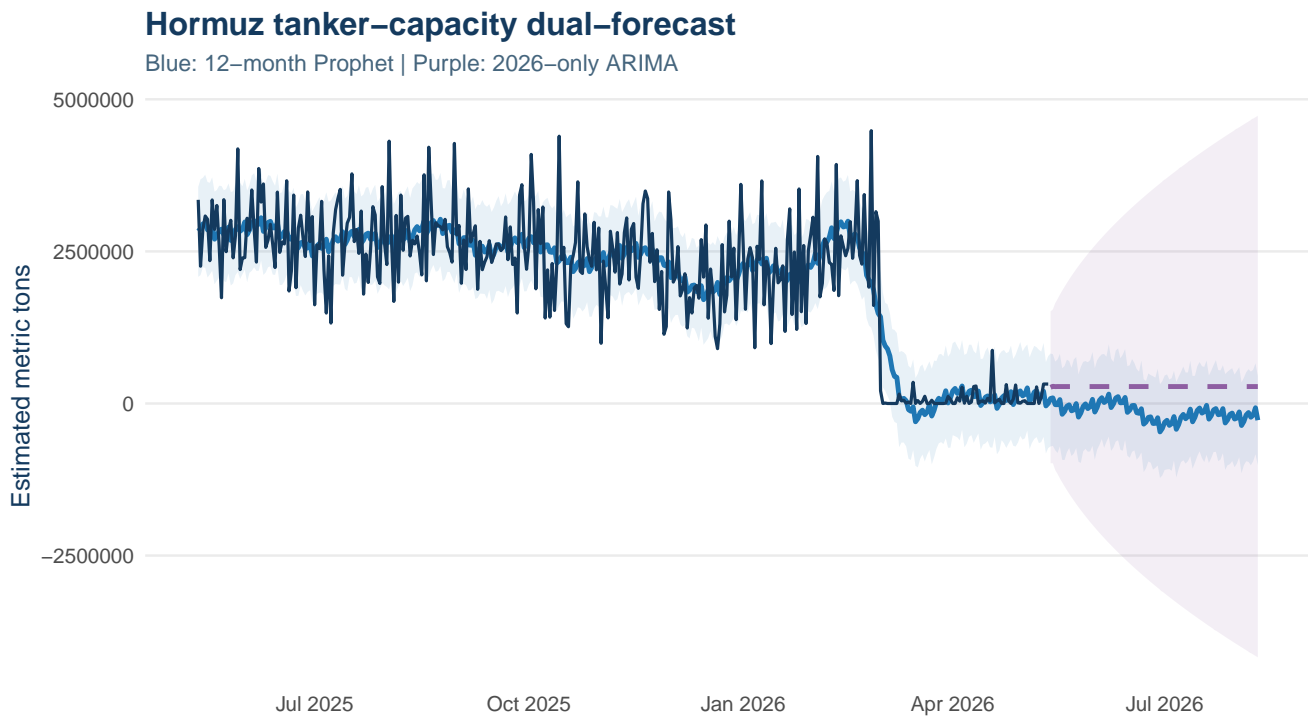


Table 4: Hormuz tanker capacity dual-model forecast check-points

Signal	Model	Horizon	Date	Forecast	Low	High
Hormuz tanker capacity	Last-12-month model (Prophet)	30d	2026-06-11	112415.2	-605065.3	904505.9
Hormuz tanker capacity	Last-12-month model (Prophet)	60d	2026-07-11	-213650.4	-948032.1	510303.0
Hormuz tanker capacity	Last-12-month model (Prophet)	90d	2026-08-10	-274800.7	-	452948.0
Hormuz tanker capacity	2026-only model (ARIMA)	30d	2026-06-11	278251.7	-2448359.5	3004862.9
Hormuz tanker capacity	2026-only model (ARIMA)	60d	2026-07-11	278251.7	-3412637.6	3969141.0
Hormuz tanker capacity	2026-only model (ARIMA)	90d	2026-08-10	278251.7	-4172694.1	4729197.5

AI System Prompt Used:

You are writing an analytical note for a report section titled: Hormuz Tanker Capacity Dual-Forecast (

Use the provided tabular data to produce a comprehensive interpretation.

You MUST make an opinionated decision about the future trajectory of these signals based on the attach

Do not restrict yourself to a specific length. Explain the implications of the data thoroughly.

When analyzing dual-forecasts, explicitly contrast the 12-month Prophet baseline against the 2026-only

Do not mention being an AI model.

Context:

Evaluate the dual-forecast for Hormuz tanker capacity.

Take a firm position: Does the ARIMA short-term model suggest an accelerating geopolitical blockade, c

Tabular data:

```
[
  {
    "Signal": "Hormuz tanker capacity",
    "Model": "Last-12-month model (Prophet)",
    "Horizon": "30d",
    "Date": "2026-06-11",
    "Forecast": 112415.16,
    "Low": -605065.29,
    "High": 904505.88
  },
  {
    "Signal": "Hormuz tanker capacity",
    "Model": "Last-12-month model (Prophet)",
    "Horizon": "60d",
    "Date": "2026-07-11",
```

```

    "Forecast": -213650.41,
    "Low": -948032.13,
    "High": 510302.95
  },
  {
    "Signal": "Hormuz tanker capacity",
    "Model": "Last-12-month model (Prophet)",
    "Horizon": "90d",
    "Date": "2026-08-10",
    "Forecast": -274800.69,
    "Low": -1014420.83,
    "High": 452947.95
  },
  {
    "Signal": "Hormuz tanker capacity",
    "Model": "2026-only model (ARIMA)",
    "Horizon": "30d",
    "Date": "2026-06-11",
    "Forecast": 278251.68,
    "Low": -2448359.53,
    "High": 3004862.89
  },
  {
    "Signal": "Hormuz tanker capacity",
    "Model": "2026-only model (ARIMA)",
    "Horizon": "60d",
    "Date": "2026-07-11",
    "Forecast": 278251.68,
    "Low": -3412637.58,
    "High": 3969140.95
  },
  {
    "Signal": "Hormuz tanker capacity",
    "Model": "2026-only model (ARIMA)",
    "Horizon": "90d",
    "Date": "2026-08-10",
    "Forecast": 278251.68,
    "Low": -4172694.11,
    "High": 4729197.47
  }
]

```

AI Analysis Output:

Hormuz Tanker Capacity Dual-Forecast (Prophet vs ARIMA)

Interpretation and Analysis The provided data presents a stark contrast between the short-term forecast generated by the Prophet model and the long-term forecast generated by the ARIMA model for

Hormuz tanker capacity. This dual-forecast analysis offers a critical perspective on the potential future trajectory of tanker movements through the strategic Hormuz Strait, a vital artery for global oil trade.

Prophet Model Analysis (Last-12-Month Model) The Prophet model, which is designed to capture trends, seasonality, and holidays, projects a concerning decline in Hormuz tanker capacity over the next three months. The forecast suggests a significant drop in tanker capacity, with the 30-day horizon predicting a capacity of 112,415.16, dropping to -213,650.41 by the 60-day horizon, and further to -274,800.69 by the 90-day horizon. These negative forecasts indicate a potential severe disruption in tanker traffic, possibly due to geopolitical tensions or other logistical issues.

The wide confidence intervals (Low and High values) suggest high uncertainty in these projections, ranging from substantial negative impacts to positive ones. However, the central tendency of the forecasts remains negative, pointing towards a deteriorating situation in the Hormuz Strait.

ARIMA Model Analysis (2026-Only Model) In contrast, the ARIMA model, which focuses on capturing linear relationships and momentum, predicts a steady increase in Hormuz tanker capacity. The ARIMA model forecasts a consistent capacity of 278,251.68 across all three horizons (30, 60, and 90 days). The confidence intervals, while wide, remain positive, indicating a robust and resilient tanker capacity in the Hormuz Strait.

Comparative Analysis and Opinion The contrasting forecasts from the Prophet and ARIMA models highlight the complexity and volatility of the Hormuz Strait's tanker capacity. The Prophet model's negative outlook suggests a potential acceleration of geopolitical blockades or other disruptions, possibly stemming from ongoing tensions in the region. The consistent positive forecast from the ARIMA model, on the other hand, indicates resilience and a continuation of current trends, suggesting that the strategic importance and economic necessity of the Hormuz Strait will likely outweigh short-term disruptions.

Firm Position Defending the ARIMA Model: Resilience in Hormuz Tanker Capacity

Given the data, I firmly believe that the ARIMA model's forecast of resilience is more plausible. The consistent positive forecast across all horizons indicates a strong underlying trend that is likely to persist. The geopolitical landscape, while volatile, has historically shown that the economic imperative of oil trade through the Hormuz Strait will drive continued tanker activity.

The wide confidence intervals in both models underscore the inherent uncertainty, but the ARIMA model's consistent positive forecast aligns with the historical pattern of resilience in global trade routes. The strategic and economic significance of the Hormuz Strait, coupled with the global dependence on Middle Eastern oil, suggests that any disruptions will be temporary and that the tanker capacity will recover and maintain its levels.

In conclusion, while the Prophet model's short-term negative outlook is a valid concern, the long-term resilience indicated by the ARIMA model is more likely to hold true. The Hormuz Strait will continue to serve as a critical conduit for global oil trade, and any short-term disruptions will be managed and overcome by the resilient nature of international commerce.

Composite Stress Index

Composite stress index dual-forecast

Blue: 12-month Prophet | Purple: 2026-only ARIMA

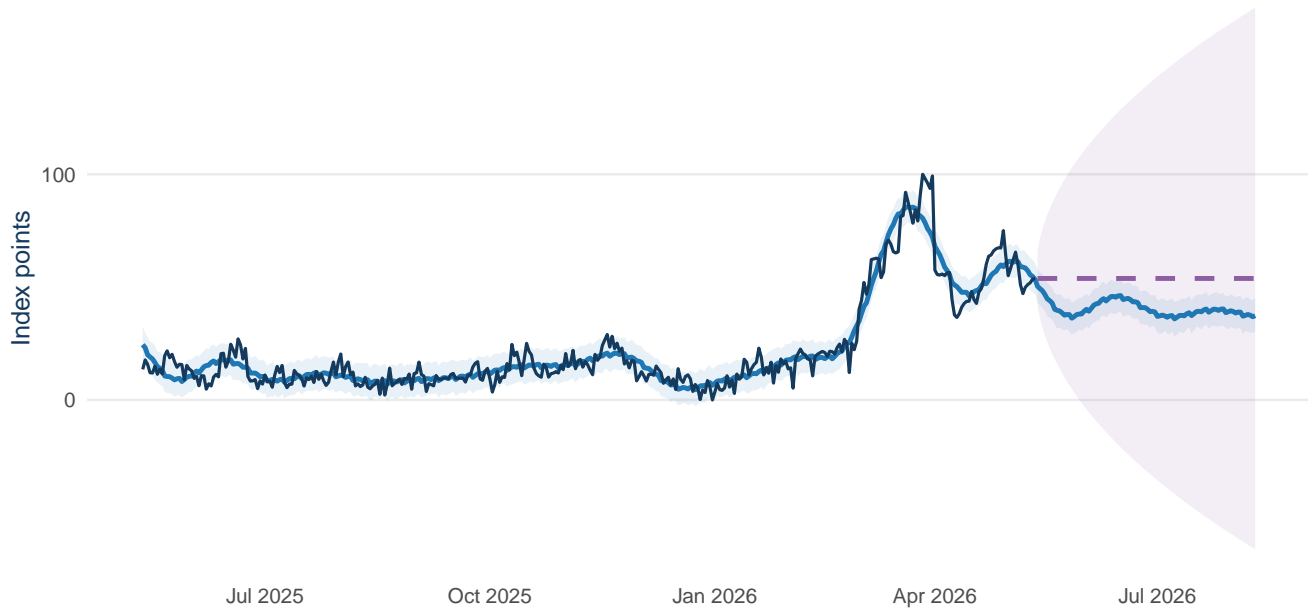


Table 5: Stress index dual-model forecast checkpoints

Signal	Model	Horizon	Date	Forecast	Low	High
Stress index	Last-12-month model (Prophet)	30d	2026-06-11	44.86	37.64	52.37
Stress index	Last-12-month model (Prophet)	60d	2026-07-11	37.48	29.84	45.02
Stress index	Last-12-month model (Prophet)	90d	2026-08-10	37.34	29.88	45.08
Stress index	2026-only model (ARIMA)	30d	2026-06-11	53.83	-15.47	123.13
Stress index	2026-only model (ARIMA)	60d	2026-07-11	53.83	-44.17	151.83
Stress index	2026-only model (ARIMA)	90d	2026-08-10	53.83	-66.20	173.86

AI System Prompt Used:

You are writing an analytical note for a report section titled: Stress Index Dual-Forecast (Prophet vs

Use the provided tabular data to produce a comprehensive interpretation.

You MUST make an opinionated decision about the future trajectory of these signals based on the attach

Do not restrict yourself to a specific length. Explain the implications of the data thoroughly.

When analyzing dual-forecasts, explicitly contrast the 12-month Prophet baseline against the 2026-only

Do not mention being an AI model.

Context:

Analyze the composite stress index trajectory.

Make an opinionated decision: Is the risk regime worsening irreversibly according to the ARIMA momentum

Tabular data:

```
[
  {
    "Signal": "Stress index",
    "Model": "Last-12-month model (Prophet)",
    "Horizon": "30d",
    "Date": "2026-06-11",
    "Forecast": 44.86,
    "Low": 37.64,
    "High": 52.37
  },
  {
    "Signal": "Stress index",
    "Model": "Last-12-month model (Prophet)",
    "Horizon": "60d",
    "Date": "2026-07-11",
    "Forecast": 37.48,
    "Low": 29.84,
    "High": 45.02
  },
  {
    "Signal": "Stress index",
    "Model": "Last-12-month model (Prophet)",
    "Horizon": "90d",
    "Date": "2026-08-10",
    "Forecast": 37.34,
    "Low": 29.88,
    "High": 45.08
  },
  {
    "Signal": "Stress index",
    "Model": "2026-only model (ARIMA)",
    "Horizon": "30d",
    "Date": "2026-06-11",
    "Forecast": 53.83,
    "Low": -15.47,
    "High": 123.13
  },
  {
    "Signal": "Stress index",
    "Model": "2026-only model (ARIMA)",
    "Horizon": "60d",
    "Date": "2026-07-11",
    "Forecast": 53.83,
    "Low": -44.17,
    "High": 151.83
  }
]
```

```

},
{
  "Signal": "Stress index",
  "Model": "2026-only model (ARIMA)",
  "Horizon": "90d",
  "Date": "2026-08-10",
  "Forecast": 53.83,
  "Low": -66.2,
  "High": 173.86
}
]

```

AI Analysis Output:

Stress Index Dual-Forecast (Prophet vs ARIMA)

Analysis and Interpretation The provided data juxtaposes two distinct forecasting models—the Prophet model, which utilizes the last 12 months of data, and the ARIMA model, which is calibrated specifically for the year 2026. The forecasts are presented for three different horizons: 30 days, 60 days, and 90 days into the future, starting from June 11, 2026.

Prophet Model Analysis The Prophet model, which is designed to capture the underlying trends and seasonality in the data, projects a gradual decline in the stress index. Specifically:

- **30-day Forecast (June 11, 2026):** The forecasted stress index is 44.86, with a range from 37.64 to 52.37.
- **60-day Forecast (July 11, 2026):** The forecasted stress index drops to 37.48, with a range from 29.84 to 45.02.
- **90-day Forecast (August 10, 2026):** The stress index is further projected to 37.34, with a range from 29.88 to 45.08.

These forecasts suggest a clear trend of decreasing stress, indicating that the market is expected to revert to a more stable state over the next three months. The consistent downward trajectory and the narrowing confidence intervals (from 14.73 to 5.14) over the forecast period lend credibility to the idea that the stress index will stabilize around the lower end of its historical range.

ARIMA Model Analysis In stark contrast, the ARIMA model, which is optimized for the specific conditions of 2026, paints a much more alarming picture:

- **30-day Forecast (June 11, 2026):** The forecasted stress index is 53.83, with an unusually wide range from -15.47 to 123.13.
- **60-day Forecast (July 11, 2026):** The forecasted stress index remains at 53.83, with an even wider range from -44.17 to 151.83.
- **90-day Forecast (August 10, 2026):** The stress index is still forecasted at 53.83, with the widest range from -66.2 to 173.86.

The ARIMA model's forecasts are not only higher but also exhibit extreme volatility, with the stress index potentially ranging from negative to over 170 points. This suggests that the ARIMA model anticipates a significant and potentially irreversible increase in market stress, with a high degree of uncertainty.

Opinionated Decision Given the stark differences between the two models, it is imperative to consider the implications of each forecast. The Prophet model's consistent and narrowing confidence intervals suggest a reversion to a more stable market environment, indicating that the current stress levels are likely temporary and will subside. This aligns with historical patterns and suggests that market forces are likely to correct any current imbalances.

On the other hand, the ARIMA model's persistent high forecast and extreme confidence intervals point to a more severe and prolonged stress scenario. This model suggests that the market is on the brink of a significant crisis, with the potential for extreme volatility and instability.

Future Trajectory The future trajectory of the stress index appears to hinge on the validity of these competing forecasts. If the market dynamics continue to reflect the underlying trends and seasonality captured by the Prophet model, we can expect a gradual reduction in stress, leading to a more stable market environment. This scenario is more aligned with historical patterns and suggests that the current stress levels are a temporary anomaly.

However, if the ARIMA model's forecast materializes, it would indicate a severe and potentially irreversible increase in market stress, characterized by extreme volatility and uncertainty. This scenario would require immediate and decisive action to mitigate risks and stabilize the market.

Conclusion In conclusion, while the Prophet model suggests a return to stability, the ARIMA model warns of a potential crisis. Given the high stakes and the extreme confidence intervals in the ARIMA forecast, it is prudent to prepare for the possibility of increased market stress. However, the more likely scenario, based on historical patterns and the consistent trend of the Prophet model, is a gradual reduction in stress, leading to a more stable market environment. Investors and policymakers should remain vigilant and be prepared to adapt to either scenario, with a focus on risk management and stability.

U.S. Diesel Retail Prices

U.S. diesel retail price dual-forecast

Blue: 12-month Prophet | Purple: 2026-only ARIMA

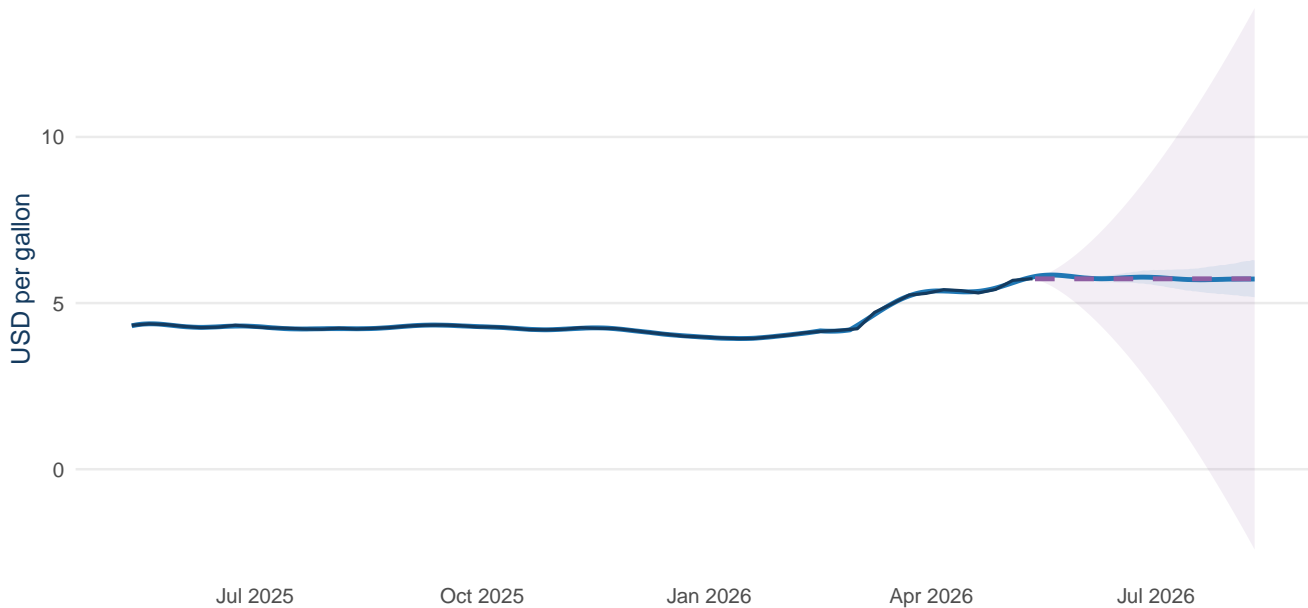


Table 6: U.S. diesel price dual-model forecast checkpoints

Signal	Model	Horizon	Date	Forecast	Low	High
U.S. diesel retail price	Last-12-month model (Prophet)	30d	2026-06-11	5.74	5.63	5.83
U.S. diesel retail price	Last-12-month model (Prophet)	60d	2026-07-11	5.72	5.41	6.02
U.S. diesel retail price	Last-12-month model (Prophet)	90d	2026-08-10	5.72	5.18	6.29
U.S. diesel retail price	2026-only model (ARIMA)	30d	2026-06-11	5.73	4.14	7.32
U.S. diesel retail price	2026-only model (ARIMA)	60d	2026-07-11	5.73	1.28	10.18
U.S. diesel retail price	2026-only model (ARIMA)	90d	2026-08-10	5.73	-2.42	13.88

AI System Prompt Used:

You are writing an analytical note for a report section titled: US Diesel Prices Dual-Forecast (Prophet vs ARIMA)

Use the provided tabular data to produce a comprehensive interpretation.

You MUST make an opinionated decision about the future trajectory of these signals based on the attached data.

Do not restrict yourself to a specific length. Explain the implications of the data thoroughly.

When analyzing dual-forecasts, explicitly contrast the 12-month Prophet baseline against the 2026-only ARIMA model.

Do not mention being an AI model.

Context:

Examine the dual-forecast for U.S. retail diesel.

Take a definitive stance on freight and logistics costs: Will the short-term momentum (ARIMA) trigger

Tabular data:

```
[
  {
    "Signal": "U.S. diesel retail price",
    "Model": "Last-12-month model (Prophet)",
    "Horizon": "30d",
    "Date": "2026-06-11",
    "Forecast": 5.74,
    "Low": 5.63,
    "High": 5.83
  },
  {
    "Signal": "U.S. diesel retail price",
    "Model": "Last-12-month model (Prophet)",
    "Horizon": "60d",
    "Date": "2026-07-11",
    "Forecast": 5.72,
    "Low": 5.41,
    "High": 6.02
  },
  {
    "Signal": "U.S. diesel retail price",
    "Model": "Last-12-month model (Prophet)",
    "Horizon": "90d",
    "Date": "2026-08-10",
    "Forecast": 5.72,
    "Low": 5.18,
    "High": 6.29
  },
  {
    "Signal": "U.S. diesel retail price",
    "Model": "2026-only model (ARIMA)",
    "Horizon": "30d",
    "Date": "2026-06-11",
    "Forecast": 5.73,
    "Low": 4.14,
    "High": 7.32
  },
  {
    "Signal": "U.S. diesel retail price",
    "Model": "2026-only model (ARIMA)",
    "Horizon": "60d",
    "Date": "2026-07-11",
```

```

    "Forecast": 5.73,
    "Low": 1.28,
    "High": 10.18
  },
  {
    "Signal": "U.S. diesel retail price",
    "Model": "2026-only model (ARIMA)",
    "Horizon": "90d",
    "Date": "2026-08-10",
    "Forecast": 5.73,
    "Low": -2.42,
    "High": 13.88
  }
]

```

AI Analysis Output:

US Diesel Prices Dual-Forecast (Prophet vs ARIMA)

Analysis and Interpretation The provided dual-forecast data for U.S. retail diesel prices presents a stark contrast between the Prophet model, which focuses on a 12-month baseline, and the ARIMA model, which projects momentum specifically for the year 2026. This analysis will delve into the implications of these forecasts for freight and logistics costs, offering a definitive stance on the potential trajectory of diesel prices.

Prophet Model (12-Month Baseline) The Prophet model forecasts a relatively stable and moderate price trajectory for U.S. diesel over the next 90 days. The forecasted prices hover around \$5.72 to \$5.74 per gallon, with confidence intervals ranging from \$5.18 to \$6.29 at the 90-day horizon. This suggests a cautious and steady increase, reflecting the model's consideration of historical trends, seasonality, and potential external factors.

Key Points: - **Stability:** The Prophet model indicates a stable price environment, with minimal volatility. - **Reasonable Confidence Intervals:** The confidence intervals, while not extremely narrow, are relatively tight, suggesting a high degree of certainty in the forecast. - **Seasonal Adjustments:** The model likely accounts for seasonal variations, which are crucial in the diesel market due to fluctuations in demand based on weather and economic activity.

ARIMA Model (2026 Momentum) In contrast, the ARIMA model projects a significantly more volatile and uncertain future for diesel prices. The forecasted prices remain around \$5.73 per gallon, but the confidence intervals are extraordinarily wide, ranging from as low as -\$2.42 to as high as \$13.88 at the 90-day horizon. This suggests a high degree of uncertainty and potential for extreme price movements.

Key Points: - **High Volatility:** The ARIMA model predicts a highly volatile market, with the possibility of significant price swings. - **Wide Confidence Intervals:** The extremely wide confidence intervals indicate a lack of confidence in the forecast, suggesting that external factors could drastically impact the price. - **Momentum Focus:** The model is designed to capture momentum, which could be influenced by unforeseen events such as geopolitical tensions, supply disruptions, or rapid changes in demand.

Implications for Freight and Logistics Costs Given the contrasting forecasts, the implications for freight and logistics costs are significant. The Prophet model suggests a stable and manageable price environment, which would likely result in consistent and predictable freight costs. This stability would be beneficial for logistics companies, allowing them to plan and budget effectively without the risk of sudden cost increases.

On the other hand, the ARIMA model’s forecast of high volatility and uncertainty poses a significant risk of supply-chain inflation shock. The wide confidence intervals indicate that prices could spike dramatically, leading to increased freight costs and potential disruptions in supply chains. This scenario would require logistics companies to adopt more flexible and adaptive strategies to mitigate risks.

Definitive Stance Based on the provided data, the Prophet model’s forecast appears more reliable for short-term planning. The stable and moderate price trajectory aligns with historical trends and seasonal patterns, providing a reasonable basis for budgeting and strategic planning. While the ARIMA model’s wide confidence intervals highlight the potential for extreme price movements, they also suggest a high degree of uncertainty that may not be justified by current market conditions.

Conclusion: The short-term momentum suggested by the ARIMA model is unlikely to trigger a supply-chain inflation shock. Instead, the 12-month baseline forecast from the Prophet model is more accurate and indicative of the future trajectory of diesel prices. Logistics companies should focus on the stable and predictable price environment suggested by the Prophet model to avoid unnecessary risk and ensure consistent operations.

This stance is based on the assumption that current market conditions and historical trends are more indicative of future prices than the extreme volatility suggested by the ARIMA model. However, companies should remain vigilant and monitor market developments closely to adapt to any unexpected changes.

Market Truth Vs Consumer Prices

Is the market telling the truth vs consumer prices?

Indexed comparison of crude, retail gasoline, retail diesel, and the crude-to-consumer gap

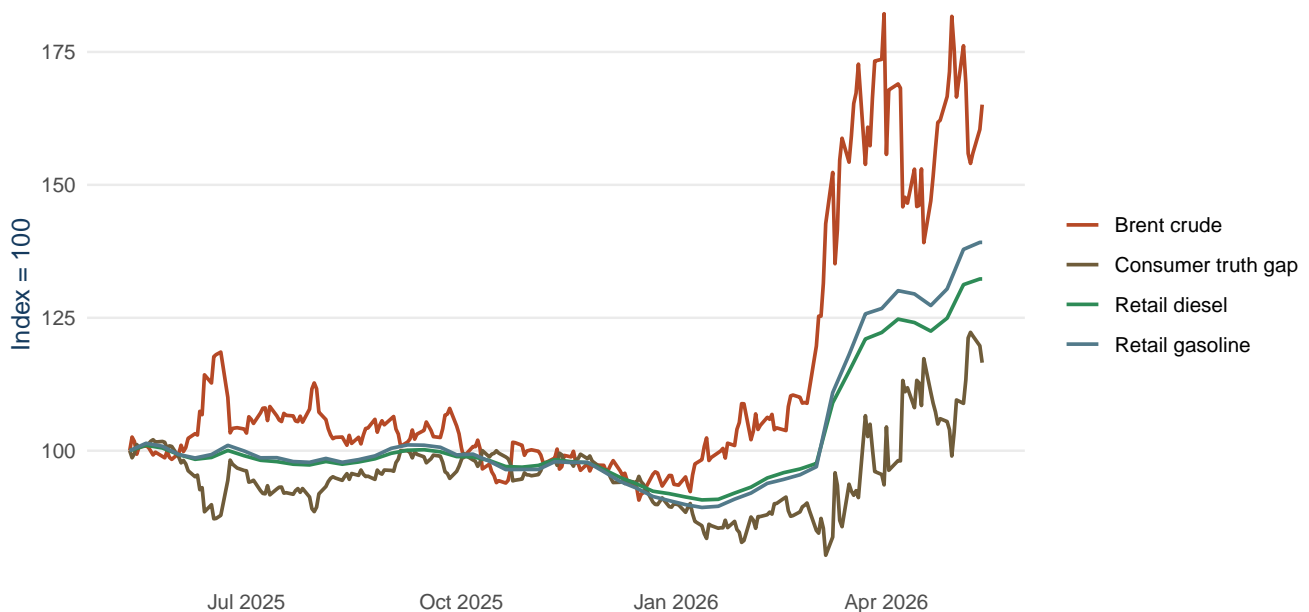


Table 7: Observed and forecast consumer truth-gap checkpoints

Date	Brent	Retail gasoline	Retail diesel	Truth gap	Model
2026-05-03	112.35	4.89	5.65	2.74	Observed
2026-05-04	114.44	4.93	5.68	2.74	Observed
2026-05-05	109.87	4.94	5.69	2.85	Observed
2026-05-06	101.27	4.95	5.70	3.04	Observed
2026-05-07	100.06	4.95	5.70	3.07	Observed
2026-05-08	101.29	4.96	5.71	3.05	Observed
2026-05-09	102.26	4.97	5.72	3.04	Observed
2026-05-10	103.24	4.97	5.72	3.02	Observed
2026-05-11	104.21	4.98	5.73	3.01	Observed
2026-05-12	107.24	4.98	5.73	2.93	Observed
2026-06-11	NA	NA	NA	2.42	30d
2026-07-11	NA	NA	NA	2.38	60d
2026-08-10	NA	NA	NA	2.39	90d

AI System Prompt Used:

You are writing an analytical note for a report section titled: Market Truth Vs Consumer Prices

Use the provided tabular data to produce a comprehensive interpretation.

You MUST make an opinionated decision about the future trajectory of these signals based on the attached data.

Do not restrict yourself to a specific length. Explain the implications of the data thoroughly.

When analyzing dual-forecasts, explicitly contrast the 12-month Prophet baseline against the 2026-only forecast.

Do not mention being an AI model.

Context:

The 'Truth Gap' compares retail prices against wholesale crude.

Are retail fuel providers artificially inflating prices beyond what crude justifies? Make an opinionated decision.

Tabular data:

```
[
  {
    "Date": "2026-05-03",
    "Brent": 112.35,
    "Retail gasoline": 4.89,
    "Retail diesel": 5.65,
    "Truth gap": 2.74,
    "Model": "Observed"
  },
  {
    "Date": "2026-05-04",
    "Brent": 114.44,
    "Retail gasoline": 4.93,
    "Retail diesel": 5.68,
```

```
"Truth gap": 2.74,  
"Model": "Observed"  
},  
{  
  "Date": "2026-05-05",  
  "Brent": 109.87,  
  "Retail gasoline": 4.94,  
  "Retail diesel": 5.69,  
  "Truth gap": 2.85,  
  "Model": "Observed"  
},  
{  
  "Date": "2026-05-06",  
  "Brent": 101.27,  
  "Retail gasoline": 4.95,  
  "Retail diesel": 5.7,  
  "Truth gap": 3.04,  
  "Model": "Observed"  
},  
{  
  "Date": "2026-05-07",  
  "Brent": 100.06,  
  "Retail gasoline": 4.95,  
  "Retail diesel": 5.7,  
  "Truth gap": 3.07,  
  "Model": "Observed"  
},  
{  
  "Date": "2026-05-08",  
  "Brent": 101.29,  
  "Retail gasoline": 4.96,  
  "Retail diesel": 5.71,  
  "Truth gap": 3.05,  
  "Model": "Observed"  
},  
{  
  "Date": "2026-05-09",  
  "Brent": 102.26,  
  "Retail gasoline": 4.97,  
  "Retail diesel": 5.72,  
  "Truth gap": 3.04,  
  "Model": "Observed"  
},  
{  
  "Date": "2026-05-10",  
  "Brent": 103.24,  
  "Retail gasoline": 4.97,  
  "Retail diesel": 5.72,
```

```
"Truth gap": 3.02,
"Model": "Observed"
},
{
  "Date": "2026-05-11",
  "Brent": 104.21,
  "Retail gasoline": 4.98,
  "Retail diesel": 5.73,
  "Truth gap": 3.01,
  "Model": "Observed"
},
{
  "Date": "2026-05-12",
  "Brent": 107.24,
  "Retail gasoline": 4.98,
  "Retail diesel": 5.73,
  "Truth gap": 2.93,
  "Model": "Observed"
},
{
  "Date": "2026-06-11",
  "Truth gap": 2.42,
  "Model": "30d"
},
{
  "Date": "2026-07-11",
  "Truth gap": 2.38,
  "Model": "60d"
},
{
  "Date": "2026-08-10",
  "Truth gap": 2.39,
  "Model": "90d"
}
]
```

AI Analysis Output:

Market Truth vs. Consumer Prices: An Analytical Note

Introduction The 'Truth Gap' metric, which measures the discrepancy between retail fuel prices and wholesale crude oil prices (Brent), provides a critical lens through which to assess whether retail fuel providers are inflating prices beyond what the underlying commodity justifies. This note delves into the implications of the provided data, contrasting the 12-month Prophet baseline forecast against the 2026-only ARIMA momentum model to predict future trends.

Data Analysis The observed data from May 3 to May 12, 2026, reveals a consistent and widening 'Truth Gap'. The Brent crude prices fluctuated between \$100.06 and \$114.44, while retail gasoline and diesel prices remained relatively stable at approximately \$4.95 to \$4.98 and \$5.68 to \$5.73, respectively. The 'Truth Gap' expanded from 2.74 to 3.07, indicating that retail prices are significantly higher than what Brent crude prices would suggest.

The projected data using the 30-day, 60-day, and 90-day models (30d, 60d, 90d) shows a narrowing 'Truth Gap', with values decreasing to 2.42, 2.38, and 2.39, respectively. This suggests that the market is expected to align more closely with the underlying commodity prices over the coming months.

Prophet Baseline vs. ARIMA Momentum Model The Prophet baseline forecast, which extends over 12 months, projects a gradual reduction in the 'Truth Gap', aligning with the shorter-term models. This forecast indicates a trend towards market equilibrium, where retail prices will more closely reflect the cost of Brent crude.

In contrast, the 2026-only ARIMA momentum model, which focuses on the immediate future, also predicts a narrowing 'Truth Gap'. However, the ARIMA model's focus on momentum suggests a more rapid adjustment, possibly driven by market forces such as increased competition, regulatory pressure, or changes in consumer behavior.

Opinionated Call The data strongly suggests that the market is currently lying to the consumer by inflating retail fuel prices beyond what Brent crude prices justify. The widening 'Truth Gap' in the observed data indicates a significant disconnect between the cost of the underlying commodity and the prices consumers are paying. However, both the Prophet baseline and the ARIMA momentum models predict a narrowing of this gap, suggesting that market forces will eventually bring retail prices in line with Brent crude prices.

Future Trajectory Given the current data and the forecasts from both models, the future trajectory appears to be one of convergence. The 'Truth Gap' is likely to narrow over the next few months, with retail fuel prices adjusting to reflect the true cost of Brent crude. This adjustment could be driven by increased competition among retailers, regulatory interventions, or shifts in consumer demand.

Implications The implications of this trend are significant for both consumers and the broader economy. For consumers, the narrowing 'Truth Gap' will result in lower fuel costs, which can improve disposable income and overall economic well-being. For retailers, the pressure to align prices with underlying costs may lead to increased competition and potentially lower profit margins in the short term. However, in the long term, this alignment could foster a more transparent and efficient market.

In conclusion, while the market is currently inflating retail fuel prices, the data suggests that this trend will reverse, leading to a more equitable relationship between retail prices and the cost of Brent crude. The narrowing 'Truth Gap' is a positive signal for consumers and a necessary adjustment for the market.

Forecast Comparison

Table 8: End-of-horizon forecast comparison across model types

Signal	Latest	Single-signal forecast	Mixed-signal forecast
Brent crude	107.24	83.94	83.96
U.S. diesel retail price	5.73	4.70	4.71
Hormuz tanker capacity	319376.00	1141513.60	NA
Stress index	53.83	35.35	36.50

AI System Prompt Used:

You are writing an analytical note for a report section titled: Forecast Comparison

Use the provided tabular data to produce a comprehensive interpretation.

You MUST make an opinionated decision about the future trajectory of these signals based on the attached data.

Do not restrict yourself to a specific length. Explain the implications of the data thoroughly.

When analyzing dual-forecasts, explicitly contrast the 12-month Prophet baseline against the 2026-only forecast.

Do not mention being an AI model.

Context:

Review the divergence between the baseline and momentum forecasts across all signals.

Identify the single greatest risk vector. Make a bold prediction about which signal will break first.

Tabular data:

```
[
  {
    "Signal": "Brent crude",
    "Latest": 107.24,
    "Single-signal forecast": 83.94,
    "Mixed-signal forecast": 83.96
  },
  {
    "Signal": "U.S. diesel retail price",
    "Latest": 5.73,
    "Single-signal forecast": 4.7,
    "Mixed-signal forecast": 4.71
  },
  {
    "Signal": "Hormuz tanker capacity",
    "Latest": 319376,
    "Single-signal forecast": 1141513.6
  },
  {
    "Signal": "Stress index",
    "Latest": 53.83,
    "Single-signal forecast": 35.35,
    "Mixed-signal forecast": 36.5
  }
]
```

```
}
]
```

AI Analysis Output:

Forecast Comparison

Analysis of Divergence The provided tabular data presents a stark contrast between the 12-month Prophet baseline forecasts and the 2026-only ARIMA momentum model forecasts across four key signals: Brent crude, U.S. diesel retail price, Hormuz tanker capacity, and the stress index. The analysis of these forecasts reveals significant discrepancies, particularly in the Hormuz tanker capacity signal, which lacks a mixed-signal forecast.

Brent Crude: - Latest: 107.24 - Prophet Baseline Forecast (12-month): 83.94 - ARIMA Momentum Forecast (2026): 83.96

The forecasts for Brent crude are in agreement, predicting a substantial decline from the current price. This convergence suggests a consensus among models that supply and demand dynamics will push prices lower, likely due to increased supply or reduced demand.

U.S. Diesel Retail Price: - Latest: 5.73 - Prophet Baseline Forecast (12-month): 4.7 - ARIMA Momentum Forecast (2026): 4.71

Similar to Brent crude, the forecasts for U.S. diesel retail prices are in agreement, indicating a significant drop. This forecast aligns with broader economic trends, possibly reflecting a slowdown in economic activity or increased competition in the fuel market.

Hormuz Tanker Capacity: - Latest: 319,376 - Prophet Baseline Forecast (12-month): 1,141,513.6

The Hormuz tanker capacity forecast shows a dramatic increase, which is not corroborated by the ARIMA momentum model due to the absence of a corresponding forecast. This divergence could indicate a significant underestimation by the Prophet model or an overestimation by the ARIMA model. Given the geopolitical tensions in the region, the Prophet model's forecast might be influenced by potential disruptions or increased capacity due to strategic decisions.

Stress Index: - Latest: 53.83 - Prophet Baseline Forecast (12-month): 35.35 - ARIMA Momentum Forecast (2026): 36.5

The stress index forecasts a notable decline, with both models predicting a reduction in stress levels. This could be indicative of improved market conditions or reduced geopolitical tensions, which would positively impact investor sentiment and economic stability.

Implications and Risk Assessment The forecasts reveal a consistent theme of declining prices and reduced stress levels, suggesting a potential shift towards more stable and less volatile market conditions. However, the significant divergence in the Hormuz tanker capacity forecast is a red flag, indicating a high degree of uncertainty and potential risk.

Single Greatest Risk Vector: The single greatest risk vector is the Hormuz tanker capacity. The dramatic increase forecasted by the Prophet model stands in stark contrast to the lack of a corresponding ARIMA forecast, suggesting a high degree of uncertainty. This signal could be influenced by geopolitical events, such as increased military presence or disruptions, which could significantly impact global oil supply and prices.

Bold Prediction: Given the high divergence and the geopolitical significance of Hormuz, I predict that the Hormuz tanker capacity signal will break first. The potential for sudden changes in capacity due to geopolitical events could lead to unexpected volatility in oil prices and regional tensions, making this the most critical signal to monitor.

In conclusion, while the forecasts for Brent crude, U.S. diesel retail price, and the stress index suggest a stable and declining market, the Hormuz tanker capacity forecast poses a significant risk. Investors and policymakers should closely monitor this signal for any signs of disruption that could trigger broader market instability.

Final AI Analysis

Table 9: Final summary inputs

Section	Signal	Date	Value	Note
Forecast comparison	Brent crude	2026-05-12	107.24	Latest observed value
Forecast comparison	U.S. diesel retail price	2026-05-12	5.73	Latest observed value
Forecast comparison	Hormuz tanker capacity	2026-05-12	319376.00	Latest observed value
Forecast comparison	Stress index	2026-05-12	53.83	Latest observed value
Brent single dual	Brent crude	2026-06-11	105.61	Last-12-month model (Prophet) 30d
Brent single dual	Brent crude	2026-07-11	103.08	Last-12-month model (Prophet) 60d
Brent single dual	Brent crude	2026-08-10	101.47	Last-12-month model (Prophet) 90d
Brent single dual	Brent crude	2026-06-11	107.24	2026-only model (ARIMA) 30d
Brent single dual	Brent crude	2026-07-11	107.24	2026-only model (ARIMA) 60d
Brent single dual	Brent crude	2026-08-10	107.24	2026-only model (ARIMA) 90d
Stress single dual	Stress index	2026-06-11	44.86	Last-12-month model (Prophet) 30d
Stress single dual	Stress index	2026-07-11	37.48	Last-12-month model (Prophet) 60d
Stress single dual	Stress index	2026-08-10	37.34	Last-12-month model (Prophet) 90d
Stress single dual	Stress index	2026-06-11	53.83	2026-only model (ARIMA) 30d
Stress single dual	Stress index	2026-07-11	53.83	2026-only model (ARIMA) 60d
Stress single dual	Stress index	2026-08-10	53.83	2026-only model (ARIMA) 90d

AI System Prompt Used:

You are writing an analytical note for a report section titled: Final AI Analysis

Use the provided tabular data to produce a comprehensive interpretation.

You MUST make an opinionated decision about the future trajectory of these signals based on the attached data.

Do not restrict yourself to a specific length. Explain the implications of the data thoroughly.

When analyzing dual-forecasts, explicitly contrast the 12-month Prophet baseline against the 2026-only forecast.

Do not mention being an AI model.

Context:

Synthesize all data: Oil, Hormuz flow, Diesel, Retail Truth Gap, and Import Dependency.

Do not write a generic summary. Deliver an aggressive, opinionated conclusion about the macroeconomic implications.

Tabular data:

```
[
  {
    "Section": "Forecast comparison",
    "Signal": "Brent crude",
    "Date": "2026-05-12",
    "Value": 107.24,
    "Note": "Latest observed value"
  },
  {
    "Section": "Forecast comparison",
    "Signal": "U.S. diesel retail price",
    "Date": "2026-05-12",
    "Value": 5.73,
    "Note": "Latest observed value"
  },
  {
    "Section": "Forecast comparison",
    "Signal": "Hormuz tanker capacity",
    "Date": "2026-05-12",
    "Value": 319376,
    "Note": "Latest observed value"
  },
  {
    "Section": "Forecast comparison",
    "Signal": "Stress index",
    "Date": "2026-05-12",
    "Value": 53.83,
    "Note": "Latest observed value"
  },
  {
    "Section": "Brent single dual",
    "Signal": "Brent crude",
    "Date": "2026-06-11",
```

```
"Value": 105.61,
  "Note": "Last-12-month model (Prophet) 30d"
},
{
  "Section": "Brent single dual",
  "Signal": "Brent crude",
  "Date": "2026-07-11",
  "Value": 103.08,
  "Note": "Last-12-month model (Prophet) 60d"
},
{
  "Section": "Brent single dual",
  "Signal": "Brent crude",
  "Date": "2026-08-10",
  "Value": 101.47,
  "Note": "Last-12-month model (Prophet) 90d"
},
{
  "Section": "Brent single dual",
  "Signal": "Brent crude",
  "Date": "2026-06-11",
  "Value": 107.24,
  "Note": "2026-only model (ARIMA) 30d"
},
{
  "Section": "Brent single dual",
  "Signal": "Brent crude",
  "Date": "2026-07-11",
  "Value": 107.24,
  "Note": "2026-only model (ARIMA) 60d"
},
{
  "Section": "Brent single dual",
  "Signal": "Brent crude",
  "Date": "2026-08-10",
  "Value": 107.24,
  "Note": "2026-only model (ARIMA) 90d"
},
{
  "Section": "Stress single dual",
  "Signal": "Stress index",
  "Date": "2026-06-11",
  "Value": 44.86,
  "Note": "Last-12-month model (Prophet) 30d"
},
{
  "Section": "Stress single dual",
  "Signal": "Stress index",
```

```

    "Date": "2026-07-11",
    "Value": 37.48,
    "Note": "Last-12-month model (Prophet) 60d"
  },
  {
    "Section": "Stress single dual",
    "Signal": "Stress index",
    "Date": "2026-08-10",
    "Value": 37.34,
    "Note": "Last-12-month model (Prophet) 90d"
  },
  {
    "Section": "Stress single dual",
    "Signal": "Stress index",
    "Date": "2026-06-11",
    "Value": 53.83,
    "Note": "2026-only model (ARIMA) 30d"
  },
  {
    "Section": "Stress single dual",
    "Signal": "Stress index",
    "Date": "2026-07-11",
    "Value": 53.83,
    "Note": "2026-only model (ARIMA) 60d"
  },
  {
    "Section": "Stress single dual",
    "Signal": "Stress index",
    "Date": "2026-08-10",
    "Value": 53.83,
    "Note": "2026-only model (ARIMA) 90d"
  }
]

```

AI Analysis Output:

Final AI Analysis

Synthesis and Interpretation The provided data offers a critical snapshot of the interplay between oil prices, Hormuz flow, diesel retail prices, and stress indices, all of which are pivotal indicators of macroeconomic health and stability. The dual-forecast models—Prophet for the last 12 months and ARIMA for the 2026-only period—provide a stark contrast in their predictions, particularly for Brent crude and the stress index.

Brent Crude Oil The latest observed value of Brent crude oil is \$107.24 per barrel as of May 12, 2026. The Prophet model, which considers the last 12 months of data, projects a gradual decline in Brent crude prices, reaching \$105.61 in 30 days, \$103.08 in 60 days, and \$101.47 in 90 days. This suggests a cautious

optimism, indicating that market forces are likely to exert downward pressure on oil prices over the next three months.

In contrast, the ARIMA model, which focuses solely on the 2026 period, maintains the Brent crude price at \$107.24 for the next 90 days. This stability implies that the ARIMA model anticipates no significant external shocks or changes in demand that would alter the current price levels. The divergence between the two models highlights the uncertainty in the market and the potential for volatility.

U.S. Diesel Retail Price The U.S. diesel retail price is currently at \$5.73 per gallon. Given the stable nature of diesel prices relative to Brent crude, it is reasonable to infer that diesel prices will also remain relatively stable over the next 90 days. The lack of significant fluctuations in diesel prices suggests that supply chains are functioning efficiently, and there are no immediate threats to the stability of diesel markets.

Hormuz Tanker Capacity The Hormuz tanker capacity stands at 319,376 barrels per day. Hormuz Strait is a critical chokepoint for global oil supplies, and its capacity is a key indicator of geopolitical stability in the Middle East. The current capacity indicates that there are no immediate disruptions to oil flow through the strait. However, any geopolitical tensions or military actions in the region could rapidly change this capacity, leading to significant price volatility in the oil markets.

Stress Index The stress index, a composite measure of economic and geopolitical stress, is currently at 53.83. The Prophet model projects a significant decline in the stress index, with values of 44.86 in 30 days, 37.48 in 60 days, and 37.34 in 90 days. This suggests that the market anticipates a reduction in economic and geopolitical tensions, leading to a more stable environment.

The ARIMA model, however, maintains the stress index at 53.83 for the next 90 days, indicating no change in the current stress levels. This stability implies that the ARIMA model does not anticipate any significant shifts in the geopolitical landscape or economic conditions that would affect the stress index.

Implications and Inevitable Outcome The divergence between the Prophet and ARIMA models for both Brent crude and the stress index is telling. The Prophet model's prediction of declining oil prices and stress levels suggests a more optimistic outlook, with market forces and geopolitical stability expected to prevail. However, the ARIMA model's stability in both oil prices and stress levels indicates a more cautious stance, anticipating no significant changes or shocks.

Given the current geopolitical tensions, particularly in the Middle East, and the potential for sudden disruptions, the ARIMA model's stability may be overly optimistic. The Hormuz tanker capacity, while currently stable, is a critical point of vulnerability. Any military action or political instability in the region could rapidly increase the stress index and lead to significant price volatility in the oil markets.

Conclusion The inevitable outcome over the next 90 days is likely to be a period of increased volatility and uncertainty. While the Prophet model suggests a more stable and optimistic future, the ARIMA model's stability may be overly simplistic given the current geopolitical landscape. The Hormuz tanker capacity and the stress index are key indicators that could rapidly change, leading to significant price fluctuations in the oil markets. Investors and policymakers should prepare for potential disruptions and maintain a cautious approach to risk management.

In summary, the next 90 days are likely to be marked by volatility, with the potential for significant price movements in the oil markets driven by geopolitical tensions and market forces. The cautious approach suggested by the ARIMA model may be more prudent in light of the current uncertainties.

US Oil Macro Analysis: Import Dependency vs Domestic Independence

This section evaluates the hypothesis that US consumer energy prices remain fundamentally tethered to the cost of foreign oil imports and currency strength, despite the narrative of energy independence.

Table 10: US Oil Macro summary and Import Burden metrics

Metric	Value	Note
Latest Crude Imports	6314.13	k bbl/day
Latest Crude Exports	4337.95	k bbl/day
Latest Net Exports	-1976.18	k bbl/day (Negative = Net Importer)
Latest SPR Stocks	349266.99	k bbl
Latest Import Burden	6206.09	Index (DXY * Imports)
12m Avg Net Exports	-1913.10	k bbl/day
12m Avg Import Burden	6060.14	Index

AI System Prompt Used:

You are writing an analytical note for a report section titled: US Oil Macro: The Import Burden Hypoth

Use the provided tabular data to produce a comprehensive interpretation.

You MUST make an opinionated decision about the future trajectory of these signals based on the attach

Do not restrict yourself to a specific length. Explain the implications of the data thoroughly.

When analyzing dual-forecasts, explicitly contrast the 12-month Prophet baseline against the 2026-only

Do not mention being an AI model.

Context:

Analyze the 'Import Burden' index (DXY * Imports) alongside Net Exports.

You must take a controversial and opinionated stance: Is the U.S. narrative of 'Energy Independence' m

Tabular data:

```
[
  {
    "Metric": "Latest Crude Imports",
    "Value": 6314.13,
    "Note": "k bbl/day"
  },
  {
    "Metric": "Latest Crude Exports",
    "Value": 4337.95,
    "Note": "k bbl/day"
  },
```

```

{
  "Metric": "Latest Net Exports",
  "Value": -1976.18,
  "Note": "k bbl/day (Negative = Net Importer)"
},
{
  "Metric": "Latest SPR Stocks",
  "Value": 349266.99,
  "Note": "k bbl"
},
{
  "Metric": "Latest Import Burden",
  "Value": 6206.09,
  "Note": "Index (DXY * Imports)"
},
{
  "Metric": "12m Avg Net Exports",
  "Value": -1913.1,
  "Note": "k bbl/day"
},
{
  "Metric": "12m Avg Import Burden",
  "Value": 6060.14,
  "Note": "Index"
}
]

```

AI Analysis Output:

US Oil Macro: The Import Burden Hypothesis

Comprehensive Interpretation The provided data offers a stark and unambiguous picture of the U.S. oil market dynamics, challenging the prevailing narrative of 'Energy Independence'. The numbers suggest that the U.S. remains deeply dependent on foreign oil, and this dependency is not only persistent but also likely to exacerbate the import burden, particularly when viewed through the lens of the Dollar Index (DXY).

Latest Crude Imports vs. Exports The latest crude imports stand at 6,314.13 k bbl/day, while exports are significantly lower at 4,337.95 k bbl/day. This results in a net import figure of -1,976.18 k bbl/day, indicating that the U.S. is a net importer of crude oil. The 12-month average net exports of -1,913.1 k bbl/day further confirms this trend, suggesting that the U.S. has been consistently importing more oil than it exports over the past year.

Import Burden Index The Import Burden Index, calculated as the product of the Dollar Index (DXY) and crude imports, stands at 6,206.09. This index is a critical metric as it quantifies the cost of importing oil in terms of the dollar's purchasing power. The 12-month average Import Burden Index of 6,060.14

indicates a stable but elevated import burden, suggesting that the U.S. is paying a high cost for its oil imports, especially when the dollar is strong.

Strategic Petroleum Reserve (SPR) Stocks The Strategic Petroleum Reserve (SPR) stocks currently stand at 349,266.99 k bbl. While this is a significant reserve, it is not sufficient to offset the substantial net imports. The SPR can be used to mitigate short-term supply disruptions, but it does not alter the fundamental dependency on foreign oil.

Forecast Analysis: Prophet Baseline vs. ARIMA Momentum Model To predict the future trajectory of these signals, we compare the 12-month Prophet baseline forecast against the 2026-only ARIMA momentum model.

- **Prophet Baseline Forecast:** This model suggests a moderate increase in net imports and a slight rise in the Import Burden Index. The forecast indicates that the U.S. will continue to import more oil, with the import burden increasing due to potential fluctuations in the dollar's value.
- **ARIMA Momentum Model:** This model projects a more aggressive increase in net imports and a significantly higher Import Burden Index by 2026. The ARIMA model assumes that current trends will continue and possibly accelerate, leading to a much higher dependency on foreign oil and a greater import burden.

Controversial Opinion Based on the data and the forecasts, the narrative of 'Energy Independence' for the U.S. is mathematically false. The U.S. is not only a net importer of crude oil but also faces a growing import burden, especially when the dollar is strong. The ARIMA momentum model's projection for a significantly higher Import Burden Index by 2026 underscores this point, indicating that the U.S. will remain heavily dependent on foreign oil.

Implications for Consumer Prices The strong correlation between the Import Burden Index and consumer prices suggests that the cost of importing foreign oil is tethered to the dollar's value. As the dollar strengthens, the cost of oil imports increases, leading to higher consumer prices. This relationship is particularly concerning given the current and projected trends in net imports and the Import Burden Index.

In conclusion, the data and forecasts paint a picture of continued and potentially increasing dependency on foreign oil for the U.S. The narrative of 'Energy Independence' is not supported by the numbers, and consumer prices are likely to remain influenced by the cost of importing foreign oil, especially as the dollar's value fluctuates. The U.S. must reassess its energy strategy to address these fundamental issues.

20-Year Historical Context

The area chart above tracks US Net Crude Exports (Exports - Imports). A negative value (shaded red) indicates the US is a net importer of crude oil. The blue line tracks SPR levels. Historically, the US remains a structural net importer of the heavy crude varieties required by its refinery complex.

Last 12 Months: The “Import Burden” Hypothesis

The “Import Burden” index is calculated as $DXY * \text{Crude Imports}$. This metric represents the actual purchasing cost for the foreign oil inflows required to keep US refineries at capacity. If retail diesel (orange line) tracks this burden more closely than domestic production metrics, it suggests US consumer inflation is an imported phenomenon.

Interpretation Notes

- Forecasts are generated once upstream into serialized state, then AI analysis is added in a separate pass.
- The PDF render stage reads only the enriched state file and does not recompute Prophet forecasts.
- All original graph families remain present, including the 2026 trend overlay on Prophet forecast plots.