



NOWCASTING THE SA ECONOMY

July 2025



Codera's FX forecasts updated daily/weekly

Forecast Deviation from Fair Value

Table 4: Codera Best Deviation From Fair Value

DATE	CURRENCY	1M	3M	6M	12M
ZAR Crosses					
2025-05-22	USDZAR	3%	4%	5%	9%
2025-05-22	EURZAR	6%	6%	7%	11%
2025-05-22	GBPZAR	12%	12%	14%	17%
Advanced Economy Currencies					
2025-05-22	GBPUSD	-1%	-1%	-1%	-4%
2025-05-22	AUDUSD	-4%	-4%	-6%	-6%
2025-05-22	NZDUSD	-2%	0%	-2%	-3%
2025-05-22	USDJPY	-2%	-1%	-4%	-1%
2025-05-22	USDCHF	-3%	-2%	-1%	1%
2025-05-22	USDCAD	5%	6%	8%	9%
2025-05-22	USDKRW	-4%	-4%	-4%	-5%
Emerging Economy Currencies					
2025-05-22	USDCNY	-3%	-3%	-2%	-3%
2025-05-22	USDINR	1%	2%	3%	4%
2025-05-22	USDMXN	-1%	-1%	-1%	-2%
2025-05-22	USDBRL	-2%	-2%	12%	-2%
2025-05-22	USDRUB	3%	9%	12%	4%
African Currencies					
2025-05-22	USDMWK	19%	22%	25%	27%
2025-05-22	USDMZN	2%	1%	0%	-1%
2025-05-22	USDAOA	14%	20%	26%	27%
2025-05-22	USDMAD	-4%	-4%	-3%	-3%

Note: values closer to zero are better.

- Suite of different models, including implied fair value estimates
- Characterise the uncertainty around forecasts
- Assess historical forecast accuracy
- Reduce risk, fine-tune pricing approaches, making educated investment choices, and strategise around international financial transactions

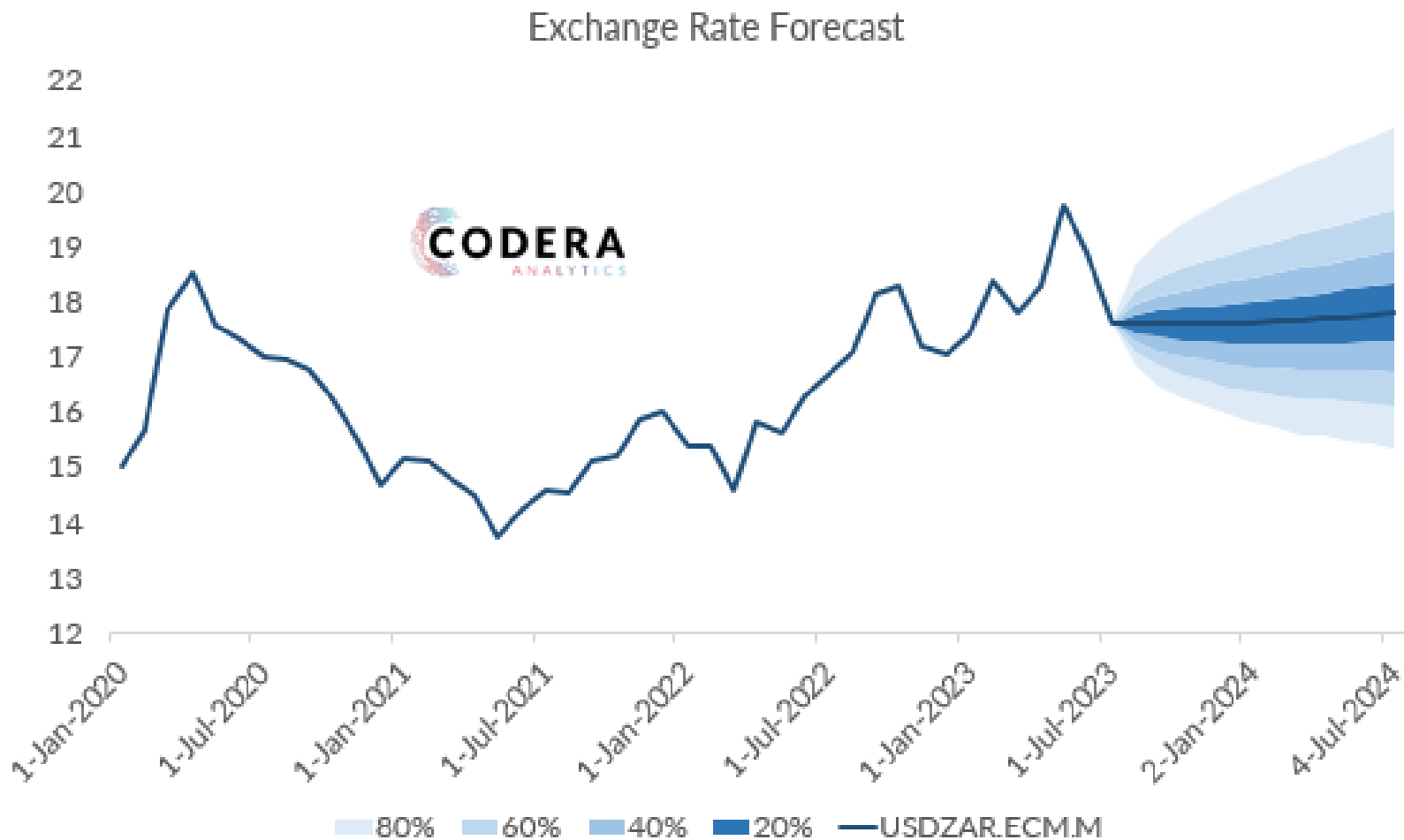


Hedging Optimisation

<https://codera.co.za/coderas-fx-forecasts/>



Interactive models for strategic decisions (in excel e.g.)

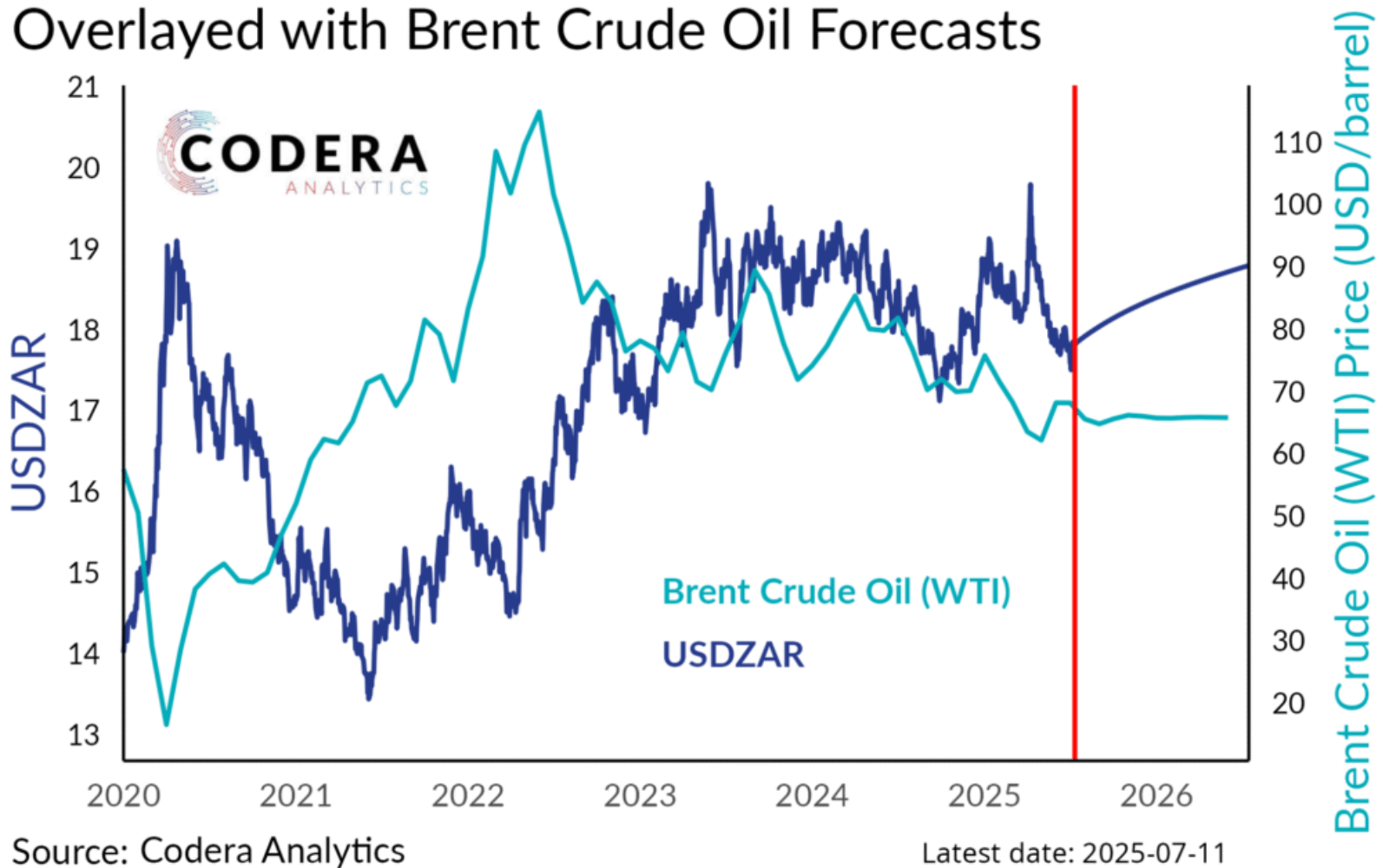


- What is the chance that rand will rise or fall?
- Customisable Forecasts



Codera's FX and oil price forecasts for CPI scenarios

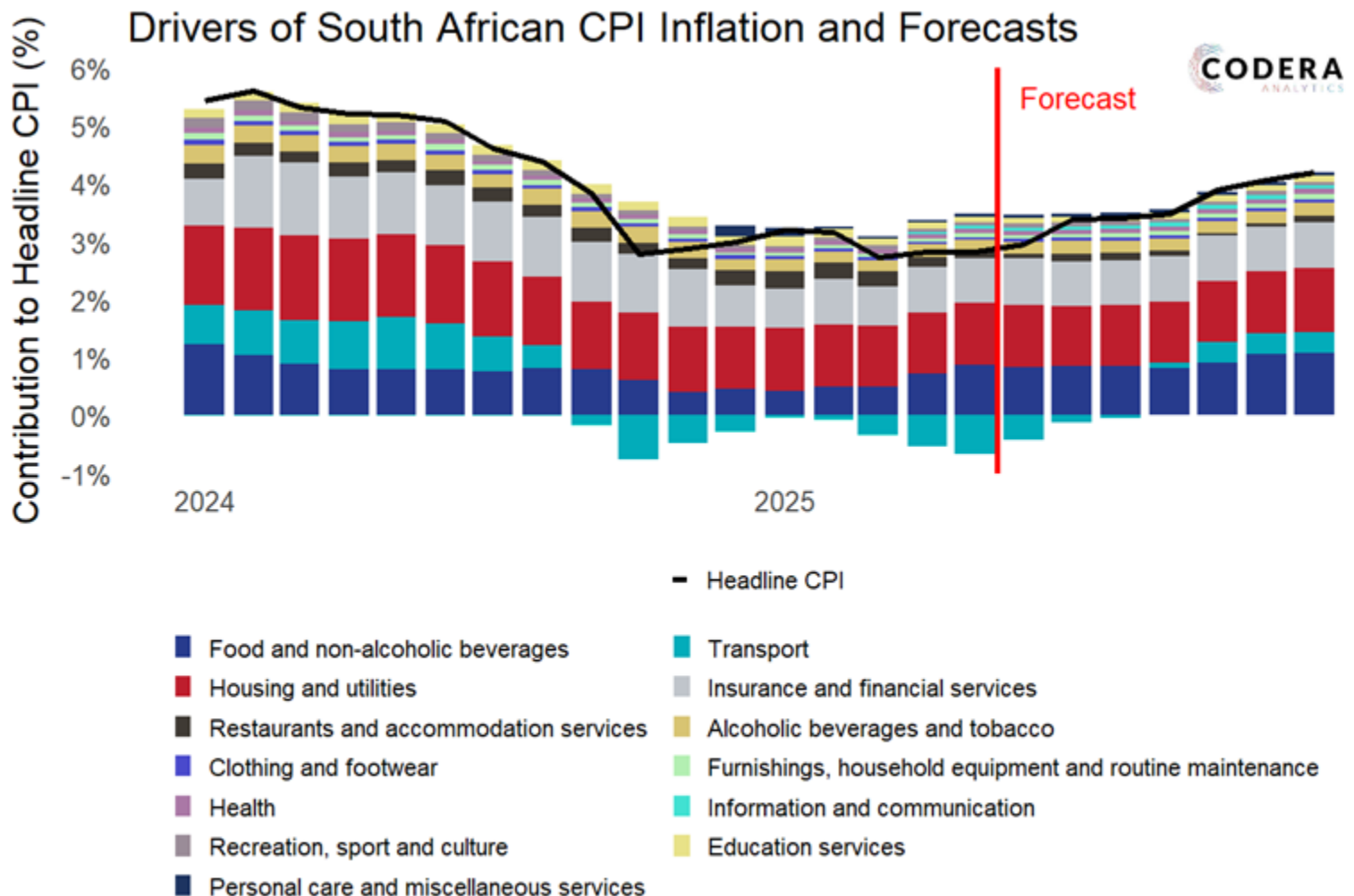
Codera USDZAR Forecasts Overlaid with Brent Crude Oil Forecasts



- Adjust assumptions for customised forecasts



CPI forecasts using real-time data



Source: Stats SA, EconData, Codera Analytics.

- Nowcast driver analysis
- Using real-time alternative data

- Demo: [Video](#)



Market reaction reports

CPI Components: Surprises and Contributions to year-on-year Core Inflation

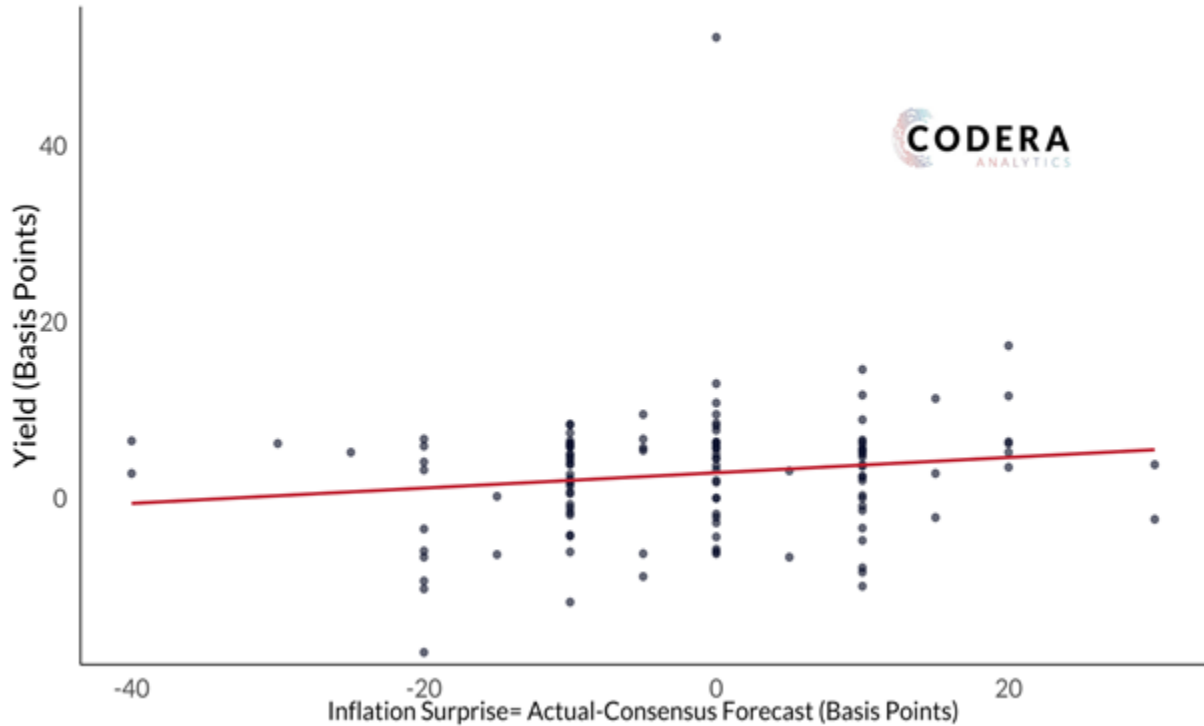
	Actual	Forecast	Weight	Core	Surprise (ppt)	Weighted Surprise (ppt)
Division Components						
Insurance and financial services	NA	NA	13.97%	TRUE	NA	NA
Restaurants and accommodation services	1.84%	2.84%	8.21%	TRUE	-1.003	-0.082
Alcoholic beverages and tobacco	4.33%	4.46%	6.23%	TRUE	-0.128	-0.008
Clothing and footwear	1.31%	1.41%	5.23%	TRUE	-0.100	-0.005
Transport	-4.57%	-4.54%	13.42%	TRUE	-0.032	-0.004
Recreation, sport and culture	1.70%	1.80%	3.94%	TRUE	-0.094	-0.004
Education	4.50%	4.50%	3.23%	TRUE	0.000	0.000
Personal care and miscellaneous services	1.71%	1.64%	3.73%	TRUE	0.063	0.002
Health	4.41%	4.27%	2.39%	TRUE	0.141	0.003
Furnishings, household equipment and routine maintenance	2.03%	1.91%	4.47%	TRUE	0.119	0.005
Information and communication	1.00%	0.91%	7.34%	TRUE	0.083	0.006
Housing and utilities	4.28%	4.21%	26.83%	TRUE	0.069	0.019

- Within minutes of data releases
- Compare data outcomes to nowcasts
- Understand and predict market reactions

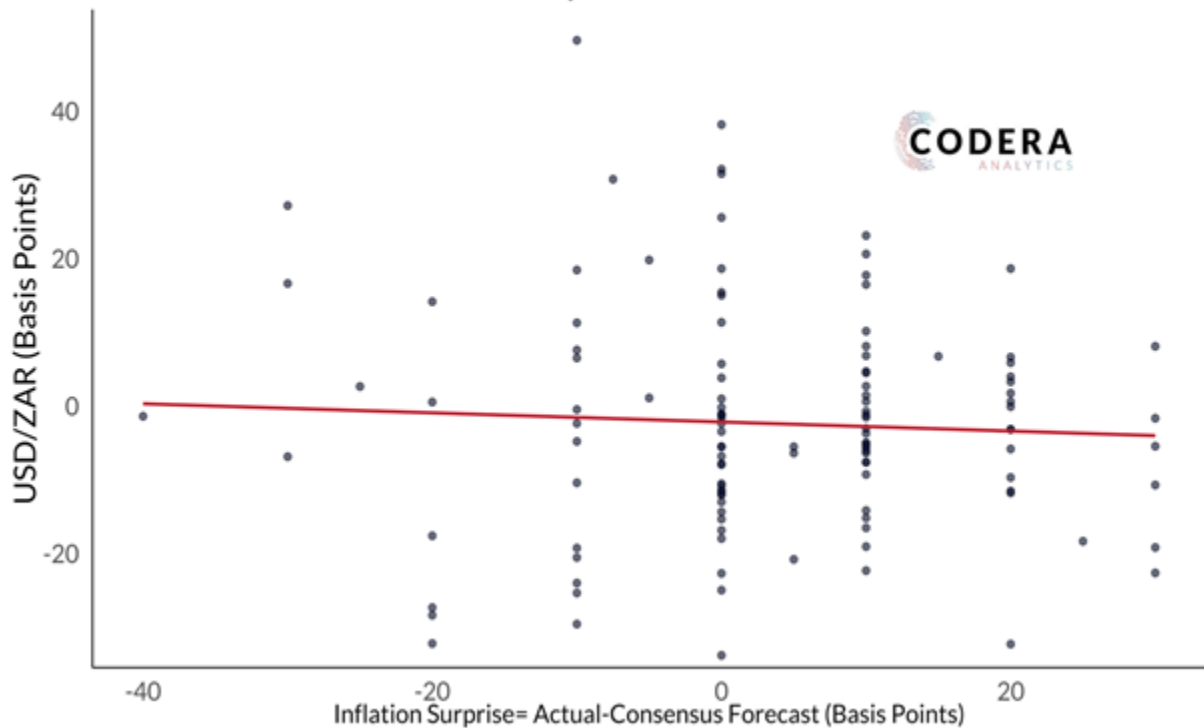


Market reaction reports

1YR Yield Reaction to Core Surprise

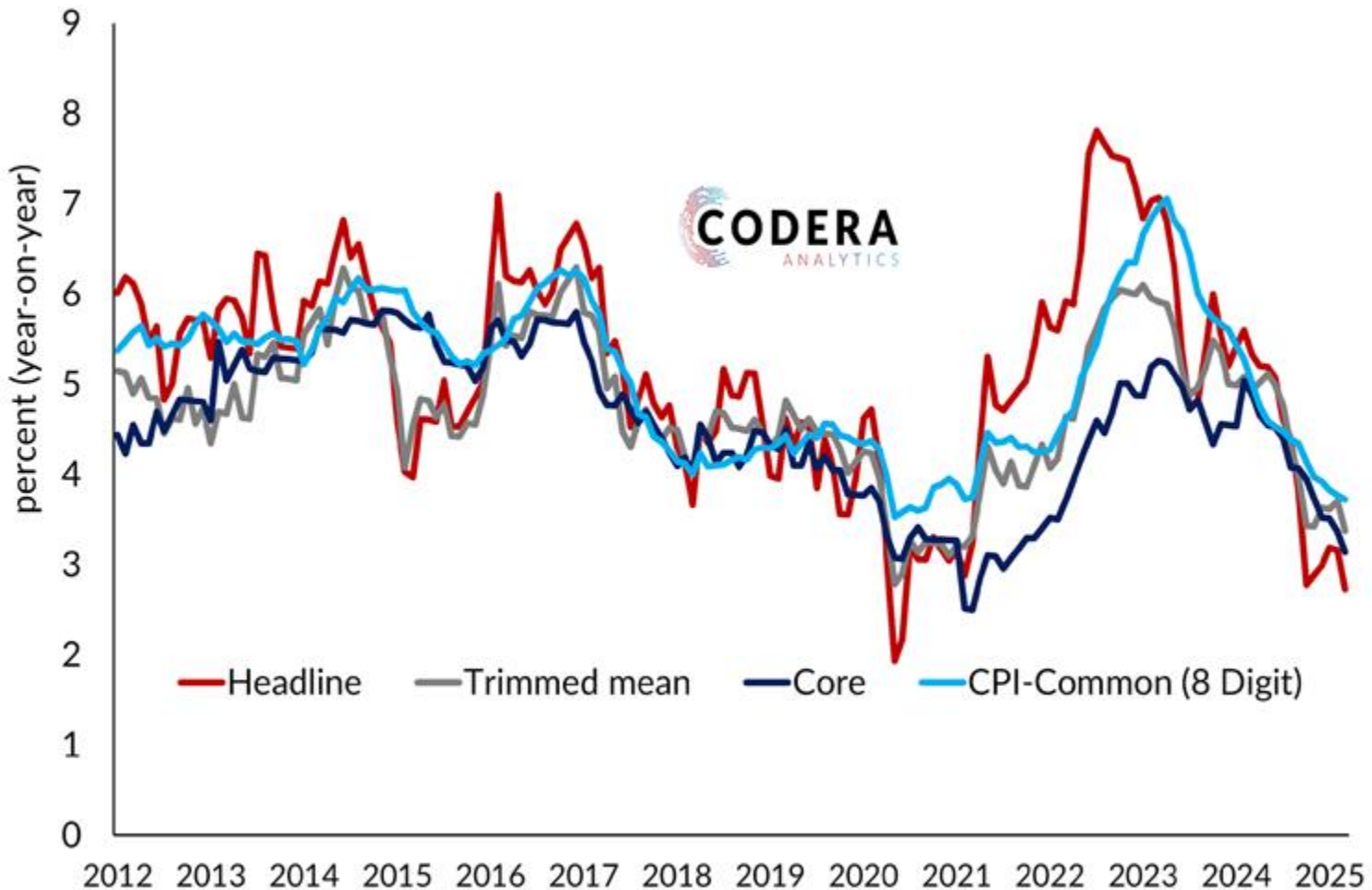


USD/ZAR Reaction to Headline Surprise



Bespoke analytics and metrics

Inflation measures for South Africa



Source: Statistics South Africa, EconData, Codera Analytics. CPI-Common measure is based on a factor model drawing on CPI data at eight-digit level of disaggregation.

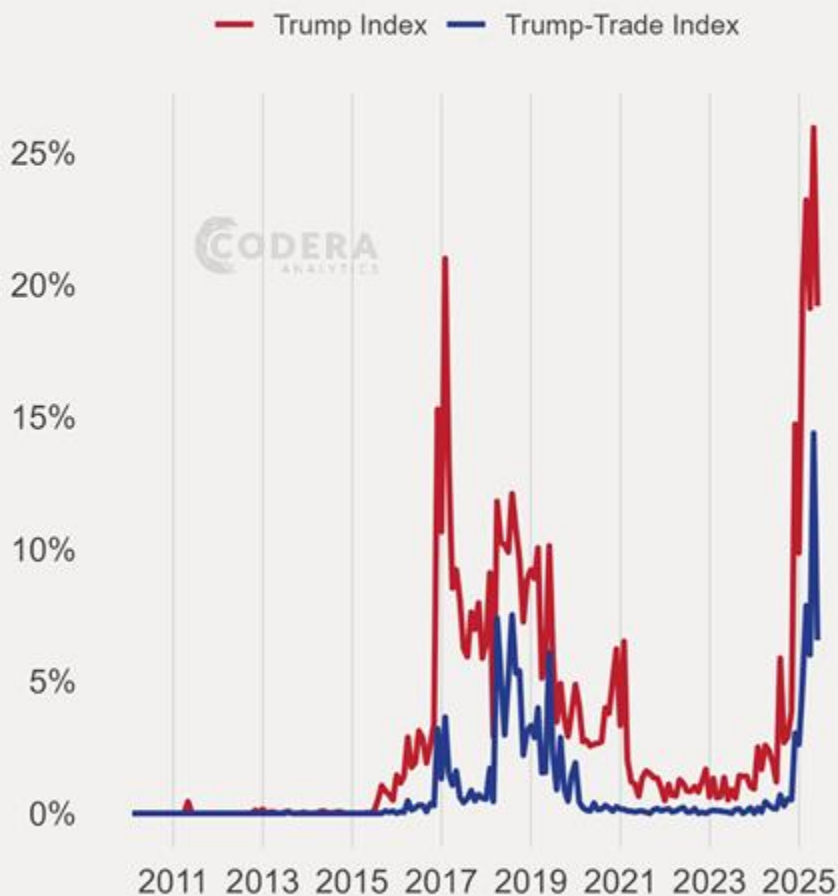
<https://codera.co.za/upgraded-cpi-common-suggests-higher-underlying-inflation-pressure-than-other-core-measures/>



Using alternative data to measure sentiment

The Loudest Voice: Trump in SA News Cycles

The Trump Index* tracks the monthly share of South African online news stories** mentioning Donald Trump at least once. Our second measure, the Trump-Trade Index*, includes trade-uncertainty terms.



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Source: BusinessLIVE.co.za (online) as of 01 June 2025.

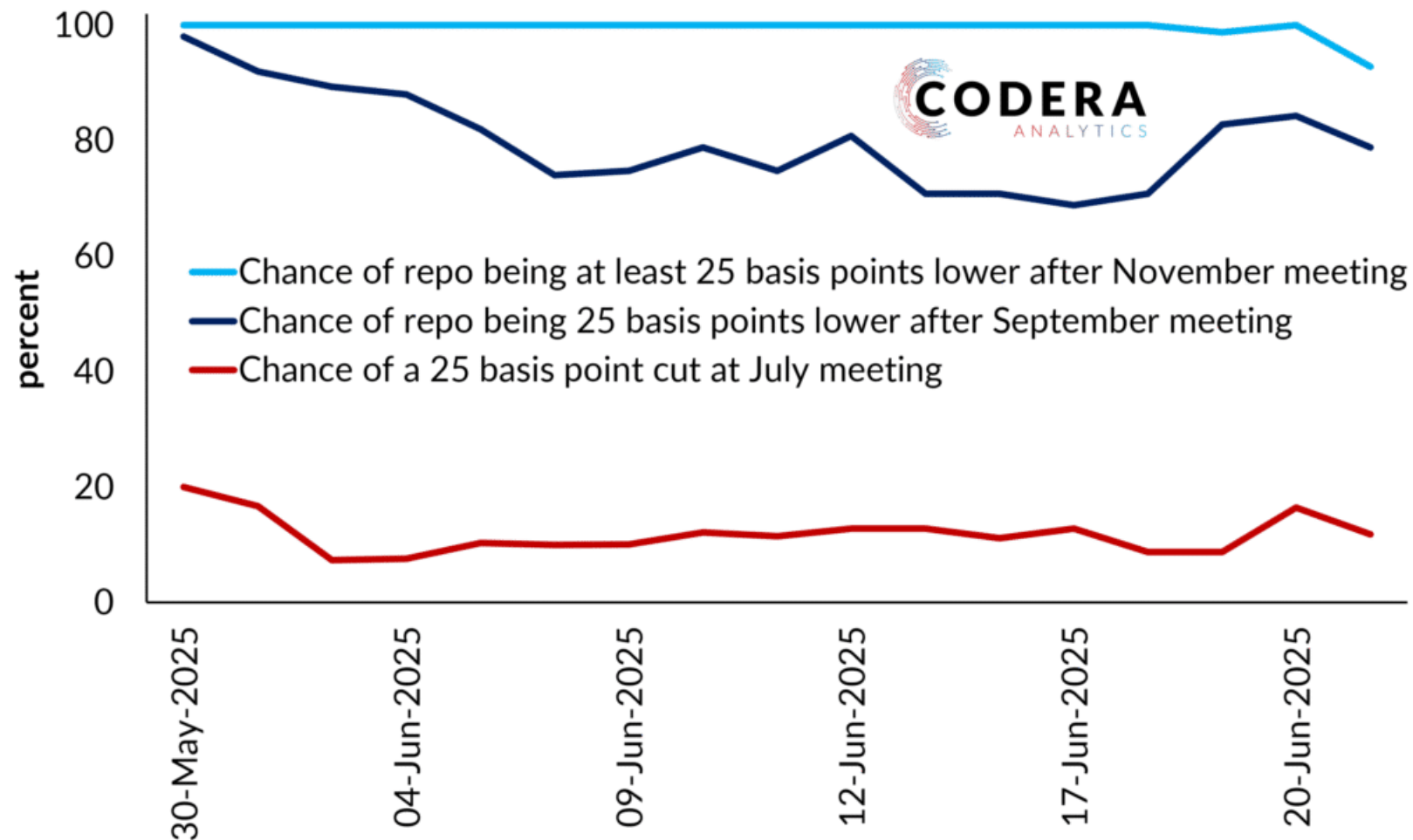
*Experimental results; models are subject to further refinement.

**News stories include domestic and international news sources across all categories.



Market pricing analysis

Evolution of market-implied probability of SARB hikes since the May 2025 MPC meeting

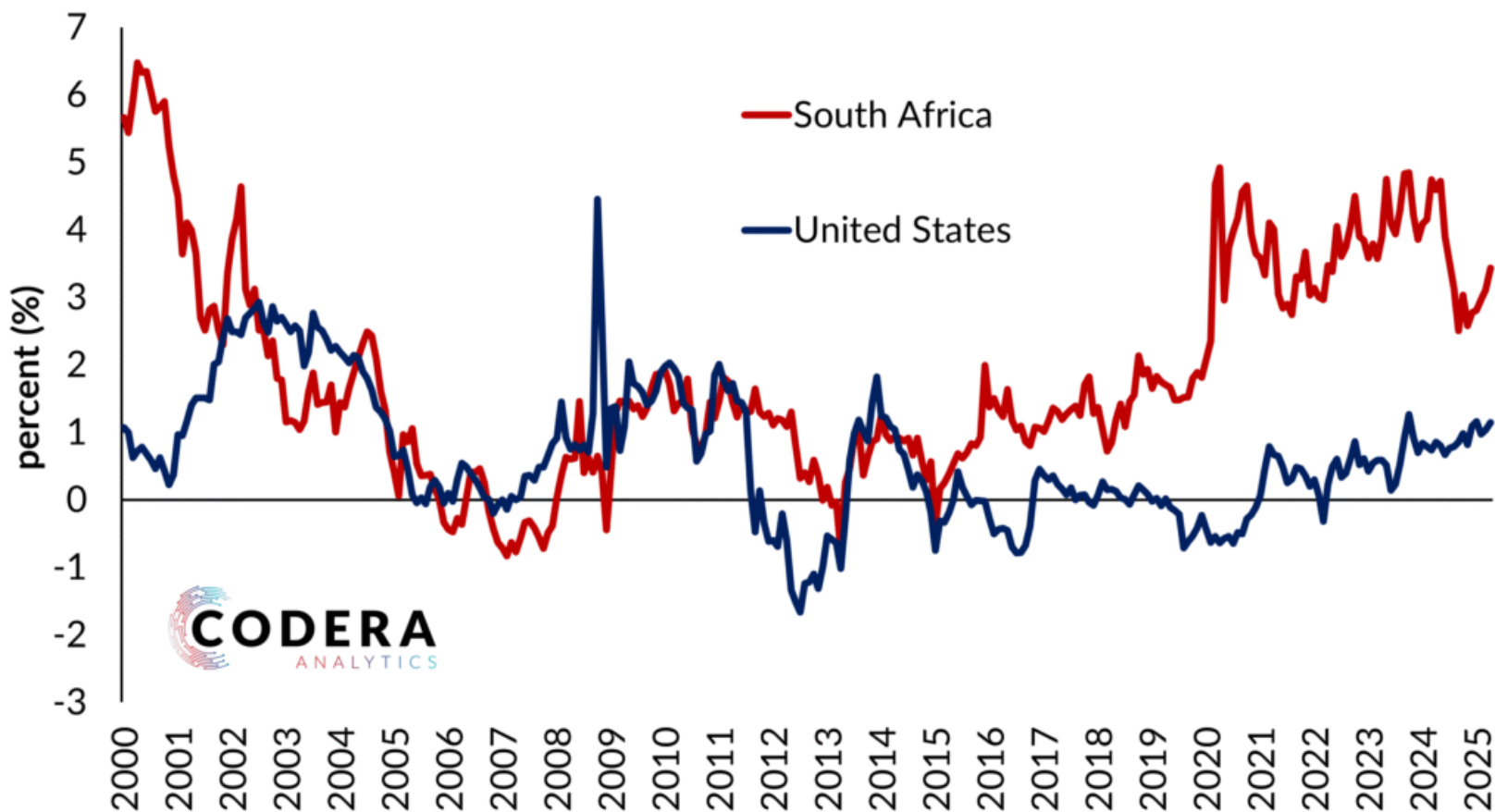


Source: Bloomberg, Codera Analytics.



Codera's term premium model example

Estimates of term premia embedded in 10-year sovereign yields

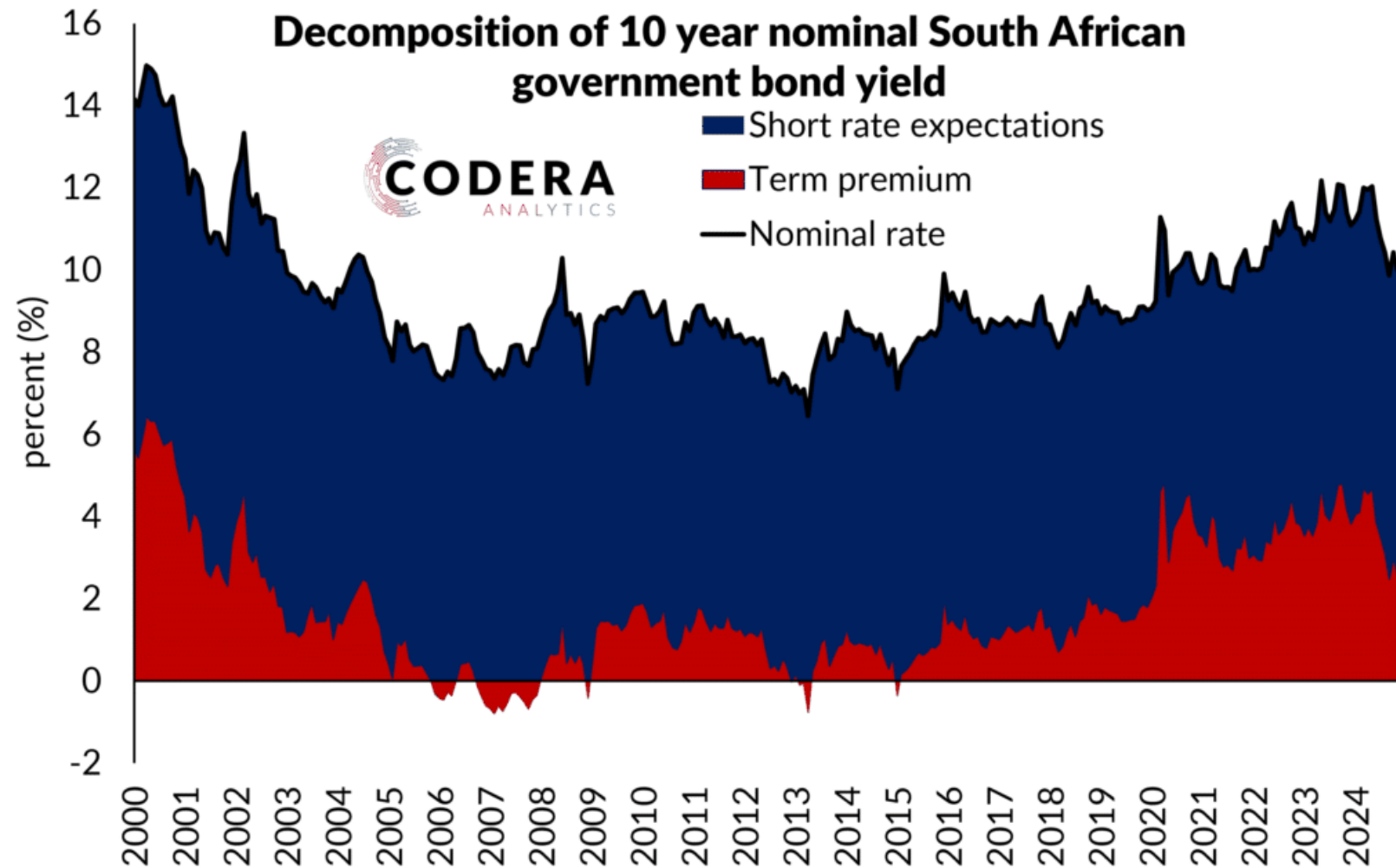


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Note: The US term premium estimate is based on Christensen, J.H.E and G.D. Rudebusch, 2012, The Response of Interest Rates to U.S. and U.K. Quantitative Easing, Economic Journal. Our approach for estimating the other term premia is based on Adrian, Crump, and Moench (2013) and described in Erasmus, R., Steenkamp, D. 2022. Term Premium Estimation for South Africa. Journal of Applied Economic Sciences, Volume XVII, Winter, 4(78): 347 – 350. The term premium is the difference between the nominal 10-year sovereign bond yield and average expected short rates over that horizon and captures sovereign bond market liquidity risk, sovereign credit risk and inflation uncertainty.



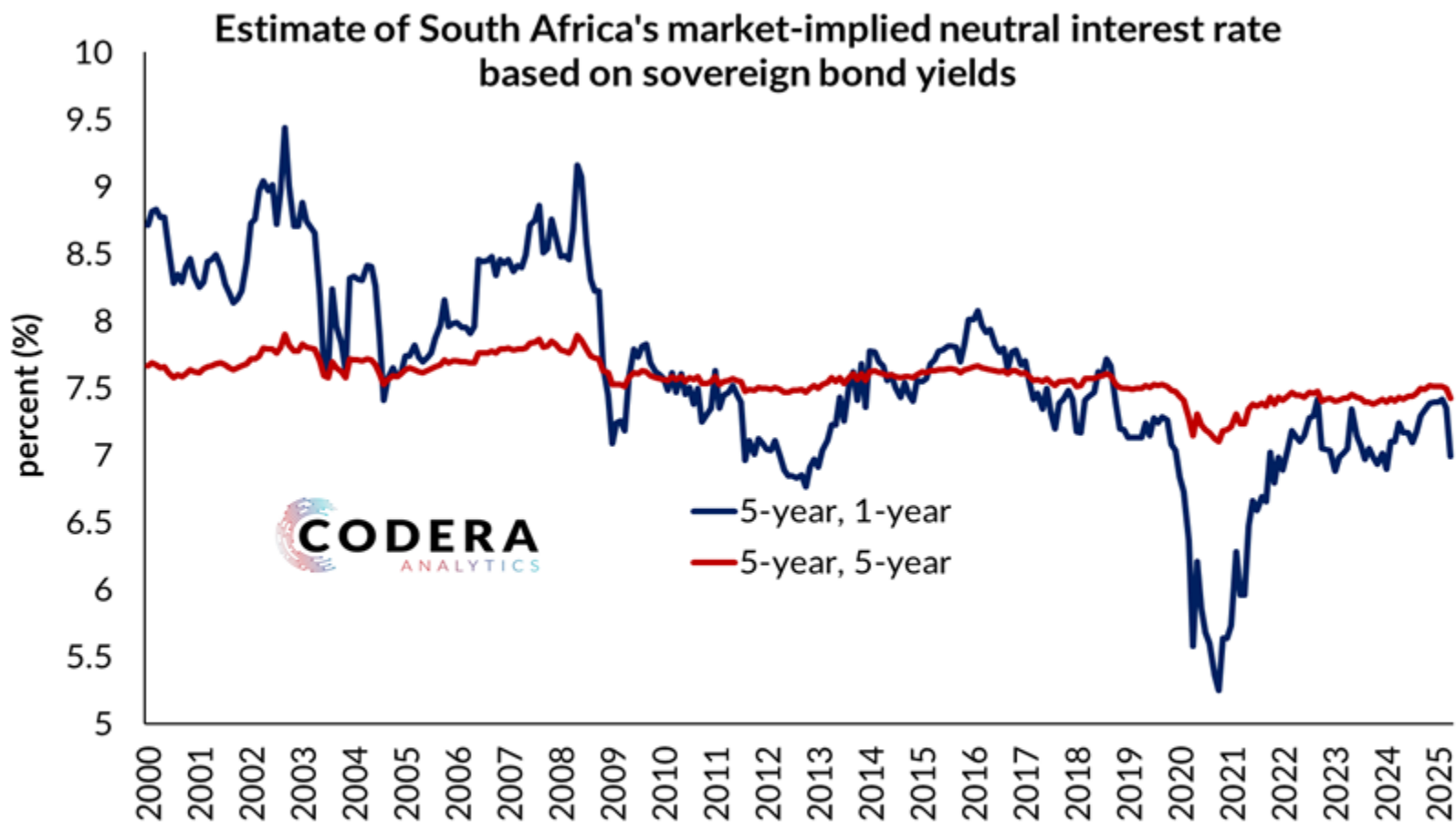
Understanding curve drivers



Note: Our approach for estimating the other term premia is described in Erasmus, R., Steenkamp, D. 2022. Term Premium Estimation for South Africa. *Journal of Applied Economic Sciences*, Volume XVII, 4(78): 347 – 350. The term premium is the difference between the nominal 10-year sovereign bond yield and average expected short rates over that horizon and captures sovereign bond market liquidity risk, sovereign credit risk and inflation uncertainty.



Understanding market-implied neutral rates



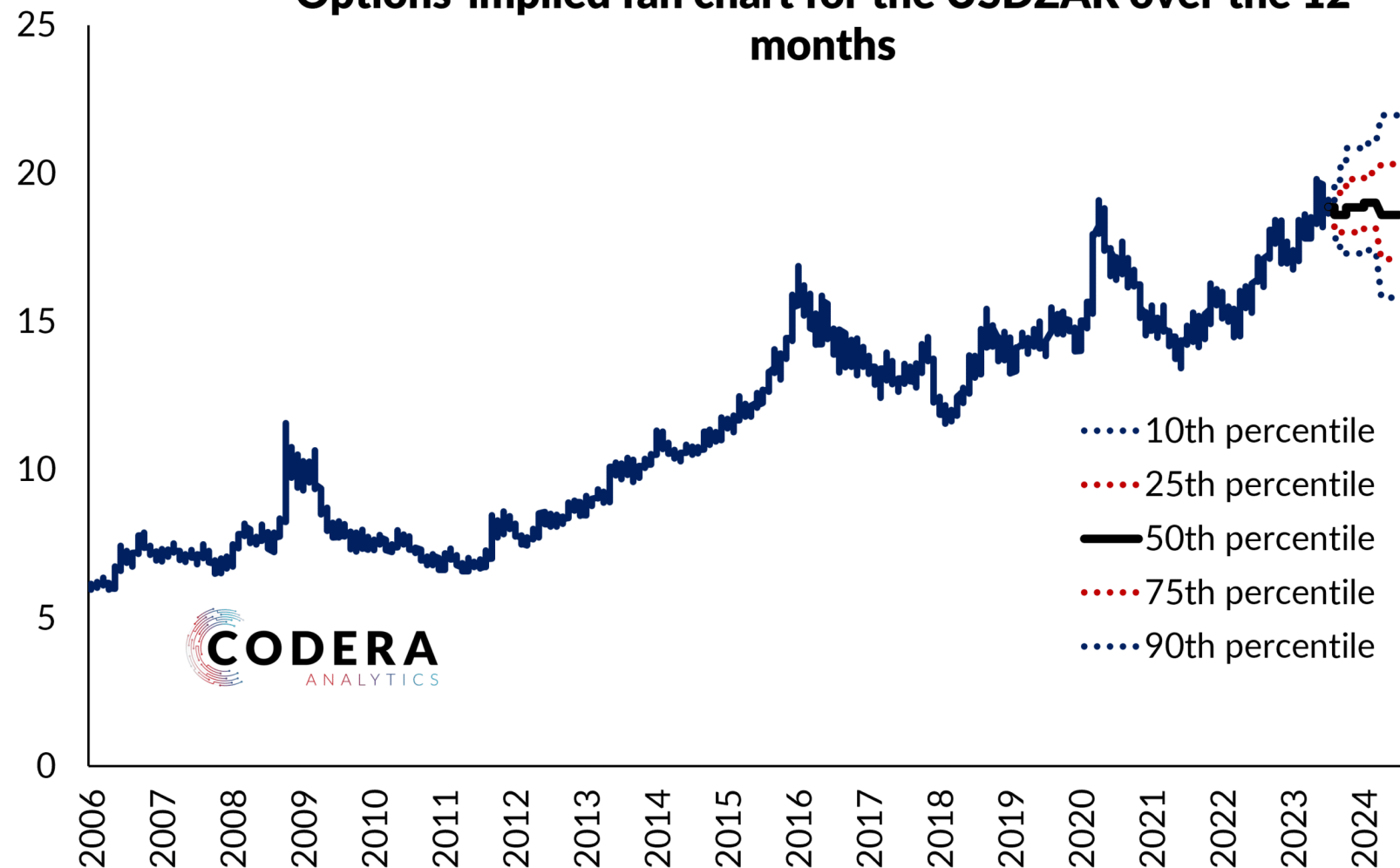
Source: Codera Analytics. Calculated as an implied a 5-year, 1/5-year forward interest rate (indicative of where 5 year interest rates are expected to be 1/5 year hence) using estimated risk neutral rates embedded in government bond curves using the term premium model of Adrian, Crump, and Moench (2013) as described in Erasmus, R., Steenkamp, D. 2022. Term Premium Estimation for South Africa. Journal of Applied Economic Sciences, Volume XVII, Winter, 4(78).

<https://codera.co.za/south-africas-market-implied-neutral-interest-rate/>



Extracting market-implied FX expectations and balance of risk

Options-implied fan chart for the USDZAR over the 12 months



Source: Bloomberg, Codera Analytics. Estimated using the approach of Malz, A. M. (1997). 'Option-implied probability distributions and currency excess returns'. Staff reports, Federal Reserve Bank of New York.



FX Hedging Analytics

Forward Rate Sensitivity to Spot Rate Changes of Selected Major Currency Pairs

Beta coefficients quantifying forward rate responsiveness to spot rate changes, estimated using an error correction models that account for cointegration between spot and forward rates.

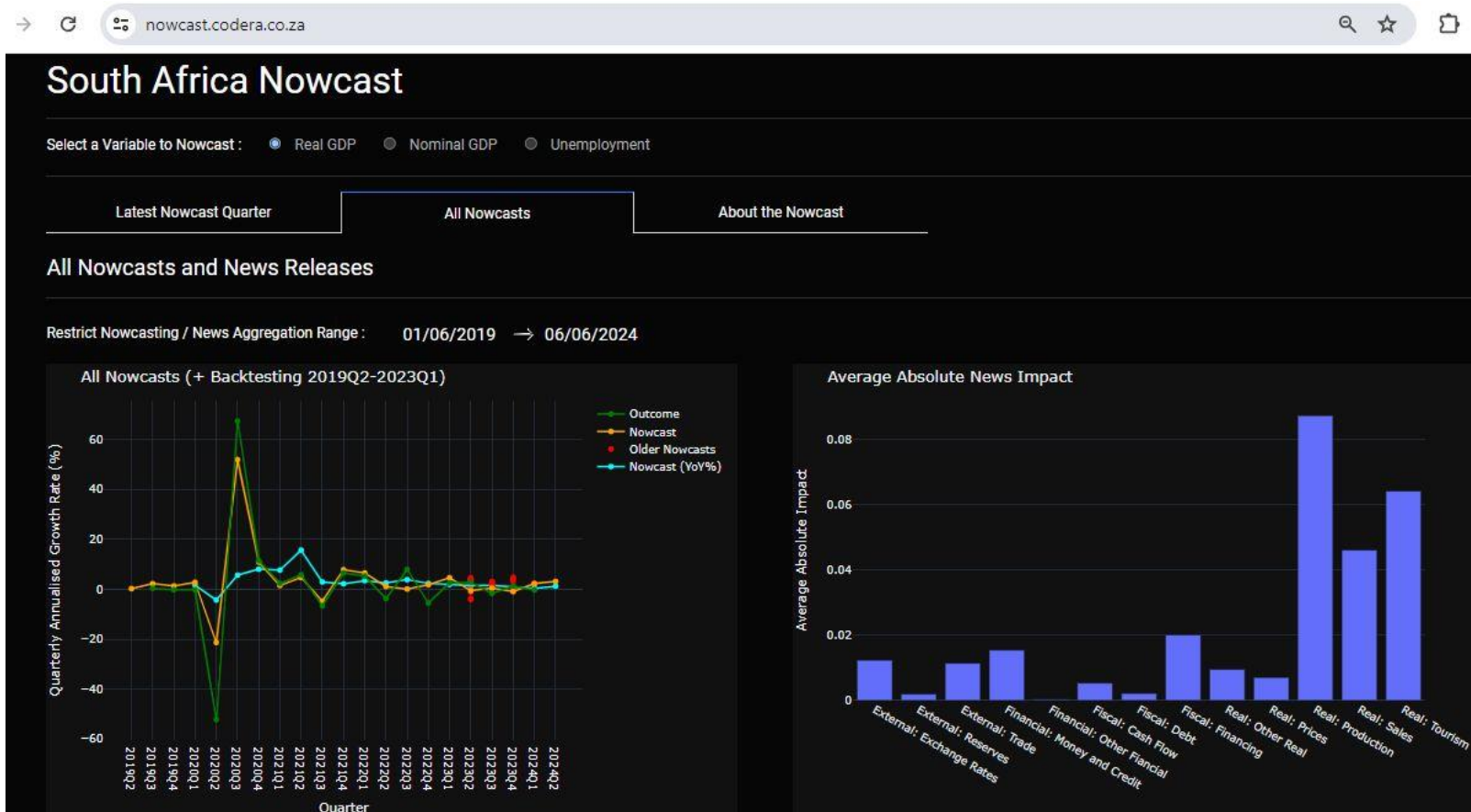


Source: Coder Analytics and Bloomberg.

Daily spot rates and forward rates between January 2000 and April 2025 were used as inputs to the model for each currency pair.



Automated nowcasts



- Weekly nowcast of GDP
- Understand impact of new data releases (news)

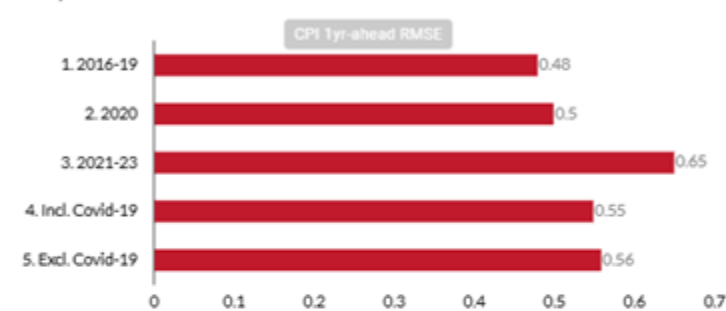


Tracking judgement/model performance and compare to SARB/NT/IMF forecasts

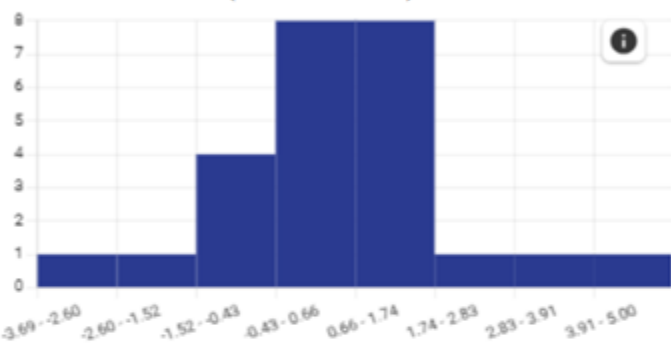


Forecast errors

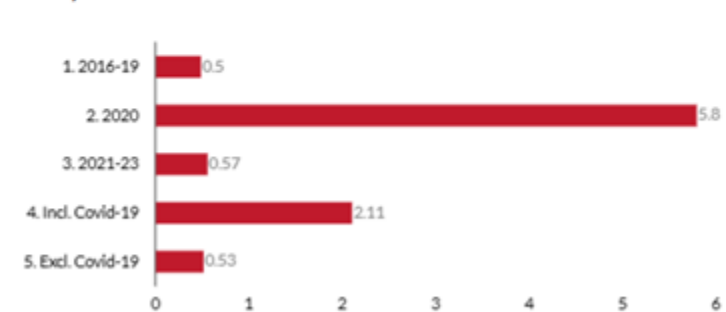
CPI 1yr-ahead RMSE



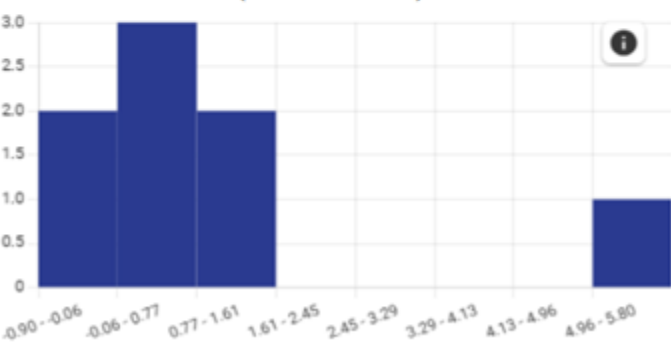
CPI error distribution (forecast - actual)



GDP 1yr-ahead RMSE



GDP error distribution (forecast - actual)





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