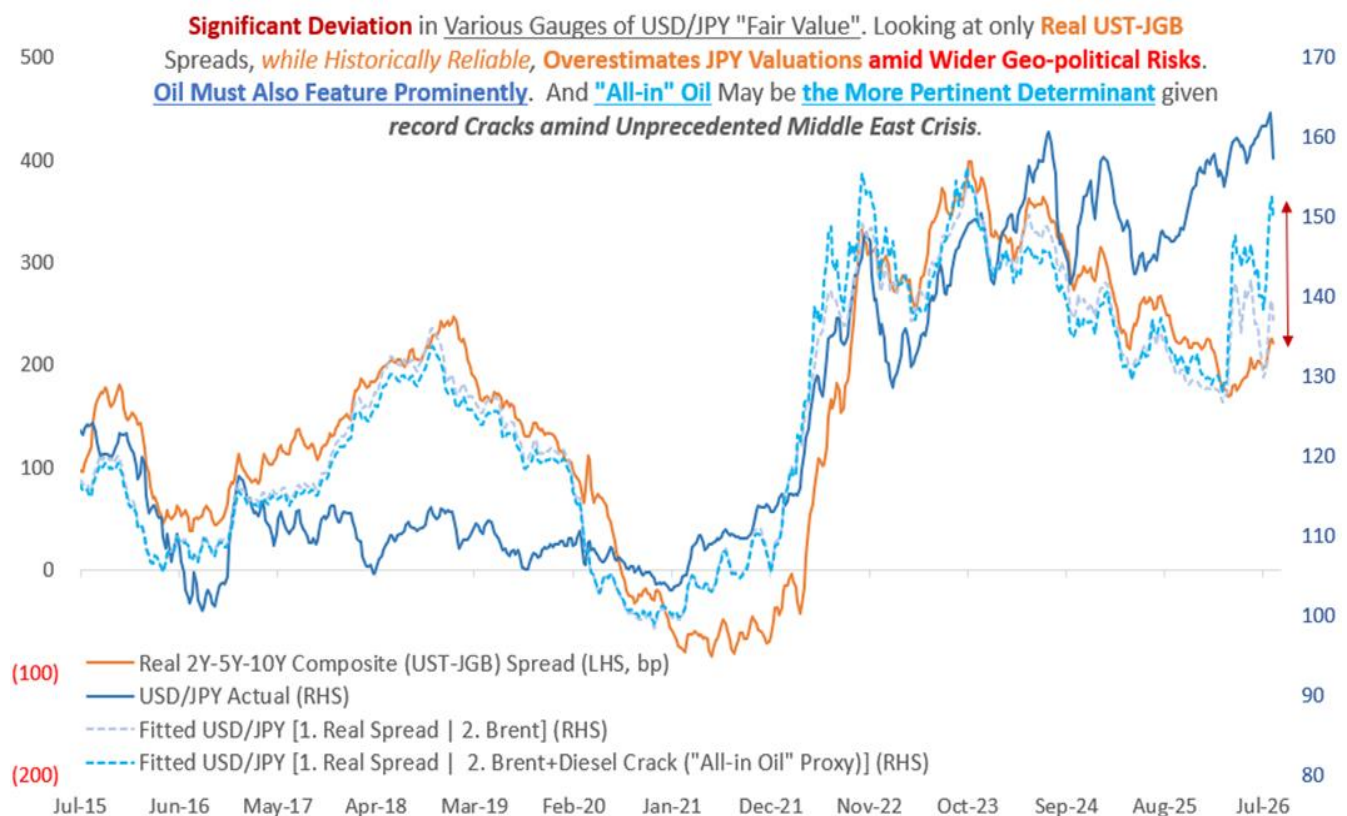


Post-Intervention JPY (Part 1): Figuring Dynamic JPY Equilibrium

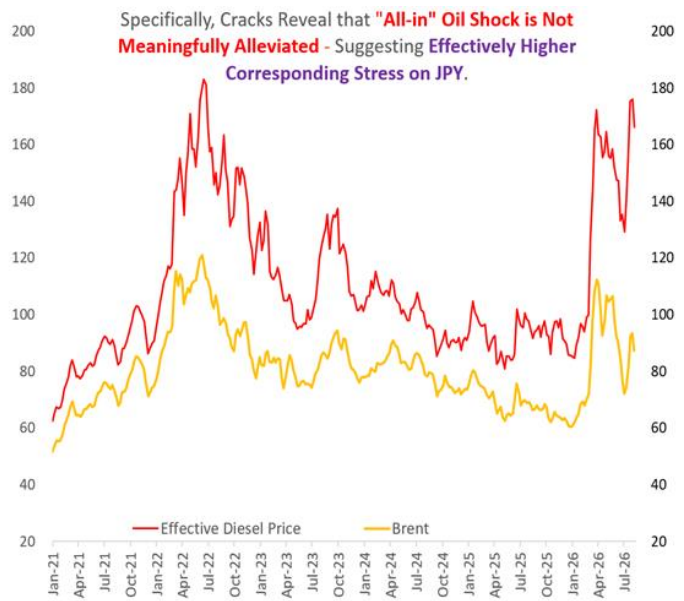
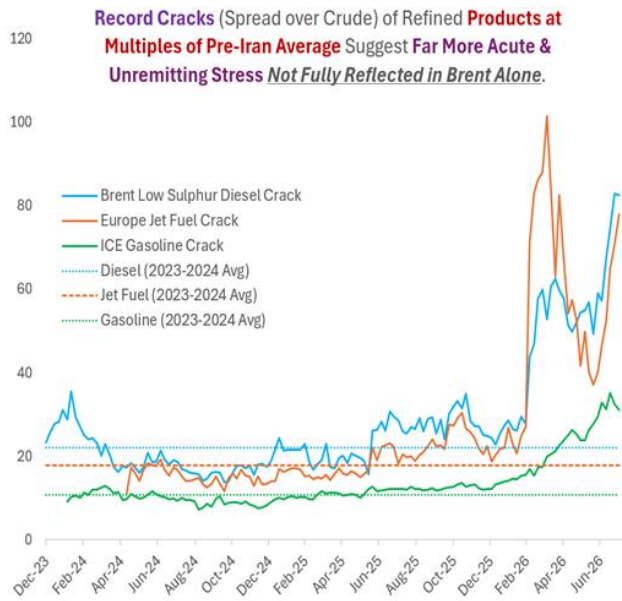
"You know my methods. Apply them!" – Sherlock Holmes, The Hound of Baskervilles

In a Nutshell:

- Coordinated JPY intervention by US and Japan amid **assertions of "very undervalued" JPY warn of "live" intervention risks** on fresh episodes of JPY weakness.
- **Admittedly**, US and Japan may **not** pursue further JPY strength **to extent (130-135)** that real rate spreads **might suggest**. *Nor even ~140 from incorporating Brent crude impact.*
- Especially **given exceptional geo-political stress** that arguably induces greater JPY risk/stress "premium".
- But **appropriately risk-augmented models comprising real spreads and "all-in oil" shocks** are **consistent with 150-155 USD/JPY**.
- Which means that **JPY bears ought to curb the temptation to lean aggressively into carry-accentuated JPY shorts**.
- For now, USD/JPY approaching too close to 160 may likely invoke further (coordinated) intervention.
- But **more importantly JPY intervention may dynamically evolve with key drivers** such as *real spreads* and *geoeconomic shocks*.



- US Treasury Sec. **Bessent has assessing** that the **JPY** is “*very undervalued*” – a point noted, if not conceded, by Japanese FinMin Katayama – is arguably, context for coordinated US-Japan JPY intervention.
- Which then **begs two key questions**:
 - a) **Just how undervalued** the JPY might deemed to be, and;
 - b) More importantly, **how much activism this might consequently prompt** from the authorities.
- The first is at least partly a **matter of perception** whilst the second is one of **inclination/appetite**.
- Depending on one’s view (and reference points), the **view of (USD/JPY “fair value” may vary dramatically**.
- Admittedly, **real rate differentials** (real UST-JGB yields spreads) **have typically** move very tightly with USD/JPY and hence **been an excellent gauge of JPY**.
- **But** this has been **challenged by geo-political stress led by**, but not limited to, **attendant oil shocks** – the **sharp surge crude oil depressing JPY** (for the same corresponding real yield spread).
- What’s more, the **exceptional surge in cracks** – which has resulted in **effectively far higher “all-in oil”/energy costs** for the same corresponding (Brent) **crude price** – **further accentuate JPY pressures from oil**.
- Consequently, there is a **risk of overestimating JPY “fair value” amid exceptional geo-political risks** (and attendant energy market stress).
- Case in point:
 - a) The **most simplistic correlation-based gauge** of real rate spreads alone appears to be consistent with ~135 USD/JPY.
 - b) **Expanding this to model** by incorporating crude price risks brings the fitted USD/JPY closer to 140.
 - c) And **further fine-tuning** to properly accounting for considerably higher “all-in oil” stress lifts modelled USD/JPY “fair value above 150.
- So, **despite the shock and awe of the coordinated intervention, prevailing geo-economic conditions** are **not conducive for sustained USD/JPY slide to 130-140, instead aligning with loftier ~ 150-160 range**.
- But equally, based on wider risk factors ostensibly driving, there appears to be **justifiable cause** (and *incentives*) **for coordinated JPY US-Japan intervention to keep USD/JPY comfortably below 160**.
- This ought to be **fair warning for JPY bears**, *lest they are tempted to lean into carry-accentuated JPY sell-off*.
- That said, **fluid geo-political risks demand dynamic assessment of JPY “fair valuation”** based on key **rate and risk drivers** *rather than a static line-in-the-sand*.



Appendix on Fitted USD/JPY Models

The Model Fitted based on "All-in Oil" (as opposed to Brent) alongside Real (UST-JGB) Spread has a far better fit.

Table 1: Regression using **Real Spread & Brent**
Output for Linear Regression Based on: 1. Real Spread | 2. Brent

Brent (β_2)	Spread (β_1)	Intercept (β_0)
0.3327	0.0912	87.9294
0.0284	0.0042	1.8373
0.6095	11.6446	#N/A
469.78	602	#N/A
127,401.33	81,629.89	#N/A

Regression Summary Statistics:

R-squared:	0.6095
Adjusted R ² :	0.6082
Std Error:	11.6446
F-statistic:	469.78
Observations:	605

Coefficient Analysis:

Variable	Coefficient	Std Error	t-Statistic	P-Value	Significance
Intercept	87.9294	1.8373	47.86	0.0000	***
Real Composite Spread	0.0912	0.0042	21.52	0.0000	***
Brent	0.3327	0.0284	11.71	0.0000	***

Significance codes: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$

Regression Equation:

$$\text{USD/JPY} = 87.93 + 0.0912 \times (\text{Real Composite Spread}) + 0.3327 \times (\text{Brent})$$

Model Interpretation:

- Real Composite Spread: A 1 bp increase in the UST-JGB spread is associated with a 9.12 bp appreciation in USD/JPY (weaker Yen)
- Brent: A \$1/bbl increase in oil prices is associated with a 33.3 bp appreciation in USD/JPY (weaker Yen)
- R² of 60.9% indicates the model explains about 61% of USD/JPY variance
- All coefficients are highly significant ($p < 0.001$)

Table 2: Regression using **Real Spread & "All-in Oil"**
Output for Linear Regression Based on: 1. Real Spread | 2. "All-in Oil"

Effective Diesel (β_2)	Spread (β_1)	Intercept (β_0)
0.2494	0.0850	89.4972
0.0163	0.0040	1.3775
0.6551	10.9435	#N/A
571.71	602	#N/A
136,936.01	72,095.21	#N/A

Regression Summary Statistics:

R-squared:	0.6551
Adjusted R ² :	0.6540
Std Error:	10.9435
F-statistic:	571.71
Observations:	605

Coefficient Analysis:

Variable	Coefficient	Std Error	t-Statistic	P-Value	Significance
Intercept	89.4972	1.3775	64.97	0.0000	***
Real Composite Spread	0.0850	0.0040	21.10	0.0000	***
"All-in Oil" Price	0.2494	0.0163	15.32	0.0000	***

Significance codes: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$

Regression Equation:

$$\text{USD/JPY} = 89.50 + 0.0850 \times (\text{Real Composite Spread}) + 0.2494 \times (\text{Effective Diesel Price})$$

Model Interpretation:

- Real Composite Spread: A 1 bp increase in the UST-JGB spread is associated with an 8.50 bp appreciation in USD/JPY (weaker Yen) - highly significant ($t=21.1$)
- Effective Diesel Price: A \$1 increase is associated with 0.25 higher USD/JPY. Higher diesel prices → weaker Yen - highly significant ($t=15.3$)
- R² of 65.5% indicates the model explains about two-thirds of USD/JPY variance
- Both variables are highly significant with p-values < 0.001
- This model performs well with updated Effective Diesel data

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