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Cross Asset Systematic Highlights

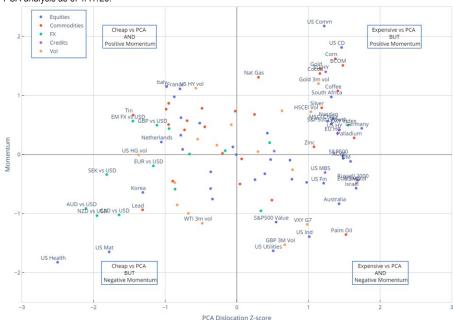
Dislocations and Positioning: A man, a plan, a canal

- We review what appears dislocated according our <u>Principal Components Analysis</u> (PCA) model. For equities, we highlight DAX and Russell 2000 as looking stretched, while US Healthcare and Materials look cheap. In FX, Dollar looks expensive, while AUD, CAD and NZD look cheap. For Bonds, Canadian and German 10y look cheap, while in Commodities, Palm Oil and Palladium look expensive.
- With the inauguration behind us, our view is that market conditions reflects improved US data, rather than opinions on policy implementation of the new administration, as we do not have visibility on that yet.
- From a pairs perspective, the PCA model recommends long US Healthcare vs. either MSCI China or US HY.

A special acknowledgement goes to Mengjiao Wang from the Data Science team, JPMORGAN CHASE BANK, N.A., for her crucial contribution to this note.

Figure 1: PCA Dislocation vs. Momentum

PCA analysis as of 1/17/25.



Source: J.P. Morgan Research, Bloomberg Finance L.P.

Global Cross Asset Strategy

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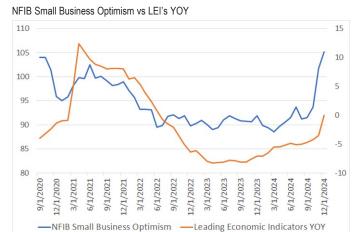
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Can equities handle higher yields?

Yes and no. Yes, they have been dealing well with higher bond yields as the reason for the higher bond yields is improvement in the US data. While the uncertainty of the policy implementation is also a reason for term premium to steepen, we would argue that this policy uncertainty is less priced in given that we don't have any visibility on that yet. However, looking at the dramatic uptick in NFIB Small Business Optimism since September, the turnaround in the downward trend in Job Openings, and PMI's, all are pointing to an improving picture for economic growth, which in turn, allows for an improved view on Earnings. Bearing in mind that the Q4 S&P500 is only 3% yoy, this is restrained in light of improving activity momentum so we believe the earnings season's conservative expectations allow upside for stocks. And of course, given that most of 2024's stock market gains were largely multiple driven (apart from Japan), it indeed should be the case that earnings ought to step up in 2025.

Figure 2: Morning in America: NFIB Small Business Optimism points to reacceleration



Source: J.P. Morgan Research, Bloomberg Finance L.P.

Figure 3: The trend of worsening market Breadth looking less bleak as participation jumps



Source: J.P. Morgan Research, Bloomberg Finance L.P.

So what can derail the picture for stocks? Stocks will not be able to endure a situation where bond yields are rising and the economic growth picture is threatened, as it is economic strength that justifies the resilience of earnings which enables stocks to look past rising bond yields. However even if economic growth continues to improve, there is also the issue how that feeds into inflation. Will we get so much economic reacceleration to set off another round of inflation, jeopardizing the Fed's current asymmetric reaction function? In such a scenario, the Fed's cuts will have been premature and will have to be reversed, a replay of the mid to late 1970's.

Quick refresher on methology: What is the dislocation we are capturing?

We construct a principal component analysis (PCA) on >100 indices covering equities, commodities, FX, bonds, yield spread, credit and volatilities using a rolling 5y of weekly data. Then for each index, we run a lasso regression against the principal components (PCs) to see which are the relevant ones, so as to have a manageable set in inputs. The integrated residuals are assumed to be mean-reverting, following an Ornstein-Uhlenbeck (OU) process. We estimate the expected mean and standard deviation of the integrated residuals in equilibrium and use them to calculate a z-score



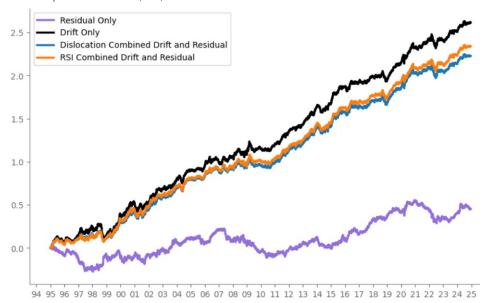
that indicates whether something is overbought / oversold. Finally, the ideal situation is where momentum confirms our view - e.g., an overbought asset that is rolling over from highs, or an oversold one that is bouncing off lows. PCA analysis is as of January 17, 2025.

Note, many mean reversion signals will focus on one instrument in isolation e.g. RSI, whereas our objective here is to assess the dislocation of one asset in the context of everything else that's going on.

Caveat: we recommend that the PCA model views be interpreted in the context of fundamental views, as assets can be overbought or oversold for a good reason.

Figure 4: PCA Residual on its own is not competitive to 'Drift' aka long-term trend, however the combination of the two produces a better Sharpe ratio.

Cumulative pnl of PCA dislocation, Drift, and their combination



Source: J.P. Morgan Research, Bloomberg Finance L.P.

Below is a list of recommended pairs according to either Drift or PCA dislocation in isolation. In both cases, we go from individual signals to pairs based on model fitness, taking into account the mean-reversion parameters of the OU process for any given pair, requiring reversion on a reasonable time frame. Expected returns for the pairs are for 1w ahead.



Figure 5: Pairs trades based on Drift

Expected 1w pnl of scaled long / short trade

drift_exp_pnl	pair
0.006646	Corn0.6*Cocoa
0.004597	US Mat-2.6*EM FX vs USD
0.004225	Palm Oil-1.9*Zinc
0.003946	Nasdaq-2.0*SEK vs USD
0.003848	Nasdaq-0.7*MSCI China

Source: J.P. Morgan Research, Bloomberg Finance L.P.

Figure 6: Pairs trades based on PCA dislocation

Expected 1w pnl of scaled long / short trade

pair	resid_exp_pnl
US Mat-0.8*South Africa	0.008871
Palm Oil-1.9*Zinc	0.008253
Tin-0.7*Palm Oil	0.007075
US Health-0.2*MSCI China	0.006610
US Health-0.7*US HY	0.006366



Composition of the Principal Components (PC's) through time

Figure 7: Principal Component 1



Source: J.P. Morgan Research, Bloomberg Finance L.P.

Figure 8: Principal Component 2



Source: J.P. Morgan Research, Bloomberg Finance L.P.

Figure 9: Principal Component 3





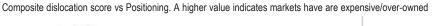
Dislocations vs. Positioning

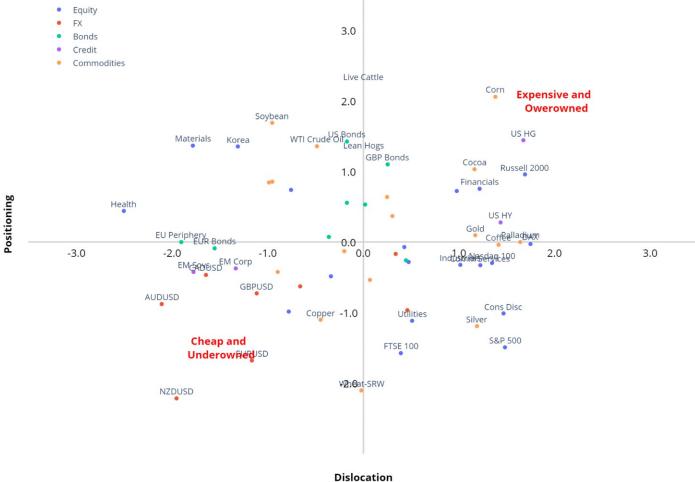
Crossing our Dislocations and Positioning frameworks, we highlight markets that PCA flags as...

- Expensive and over-owned: Russell 2000, US HG
- Cheap and under-owned: NZD, AUD

Tactical Dislocation signals are obtained from our regularised PCA model. Positioning aggregates the indicators available for each market from various sources.

Figure 10: PCA dislocations vs Positioning





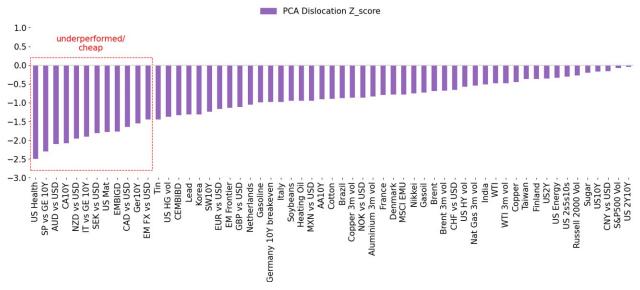


PCA Dislocations

What's out of whack now with respect to PCA? Green = cheap, Red = expensive

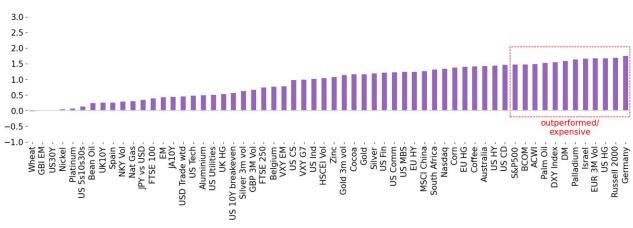
- FX: AUD, NZD, SEK, CAD, DXY
- Commodities: Palladium, Palm Oil
- Equities: US Health, US Materials, DAX, Russell 2000
- **Bonds:** Canada 10y, Germany 10y
- Credit: US HG
- Volatility: EUR 3m Vol

Figure 11: PCA dislocations: What's cheap?



Source: J.P. Morgan Research, Bloomberg Finance L.P.

Figure 12: PCA dislocations: What's expensive?





Cross Asset Positioning

Our Positioning framework aggregates more than 100 indicators from futures markets (no*), fund betas (*), surveys (**) and option markets (***). Importantly, no one positioning indicator can offer a complete picture on positioning, so the list below reflects ad hoc choices and availability for a given asset class.

The following indicators are outside the +1.5/-1.5 threshold. Red = over-owned, Green = under-owned

- Equities: Nikkei, FTSE 100
- Credit: US HG
- Bonds:
- FX: EUR, NZD
- Commodities: Cattle, Corn, Soybean, Oil, Silver, Wheat

Figure 13: Cross-Asset Positioning: Stocks & Bonds

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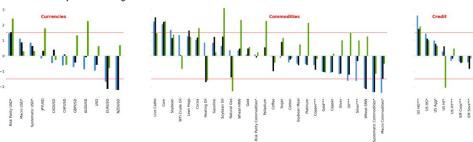
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5Y z-score. Positive means positioning is above average. No * = futures data. * = fund betas. ** = surveys *** = option data. All sorted by latest reading

Source: J.P. Morgan Research, Bloomberg Finance L.P.

Figure 14: Cross-Asset Positioning: Currencies, Commodities, and Credit

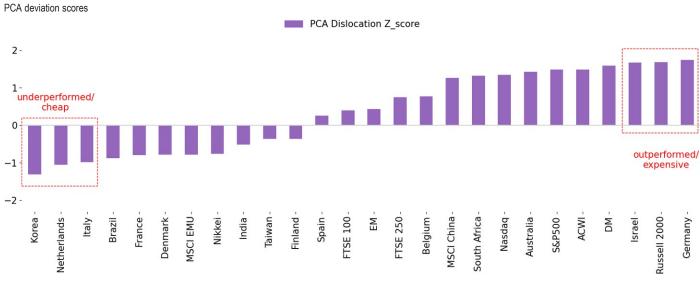
5Y z-score. Positive means positioning is above average. No * = futures data. * = fund betas. ** = surveys *** = option data. All sorted by latest reading





Appendix: Dislocations within Equities

Figure 15: Equities (regions)



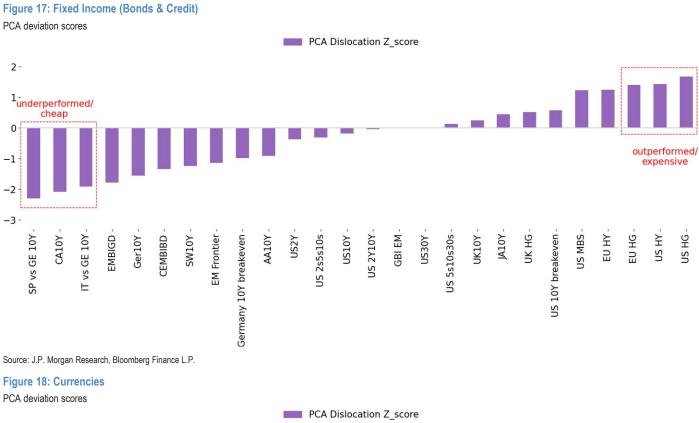
Source: J.P. Morgan Research, Bloomberg Finance L.P.



Source: J.P. Morgan Research, Bloomberg Finance L.P.



Appendix: Dislocation in Fixed Income and Currencies

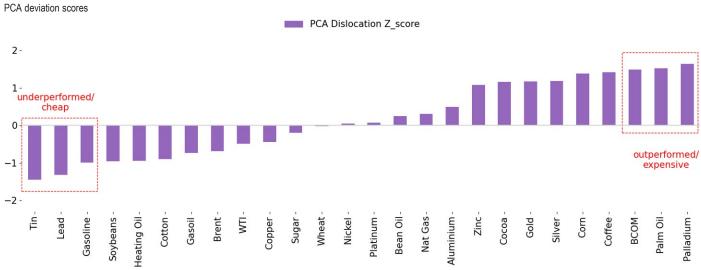


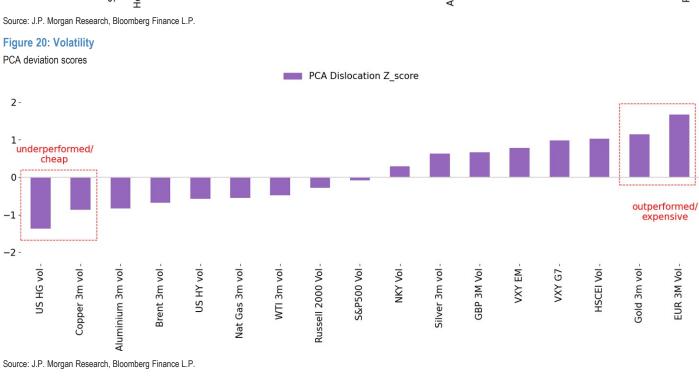




Appendix: Dislocations in Commodities and Volatility

Figure 19: Commodities







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21 January 2025

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