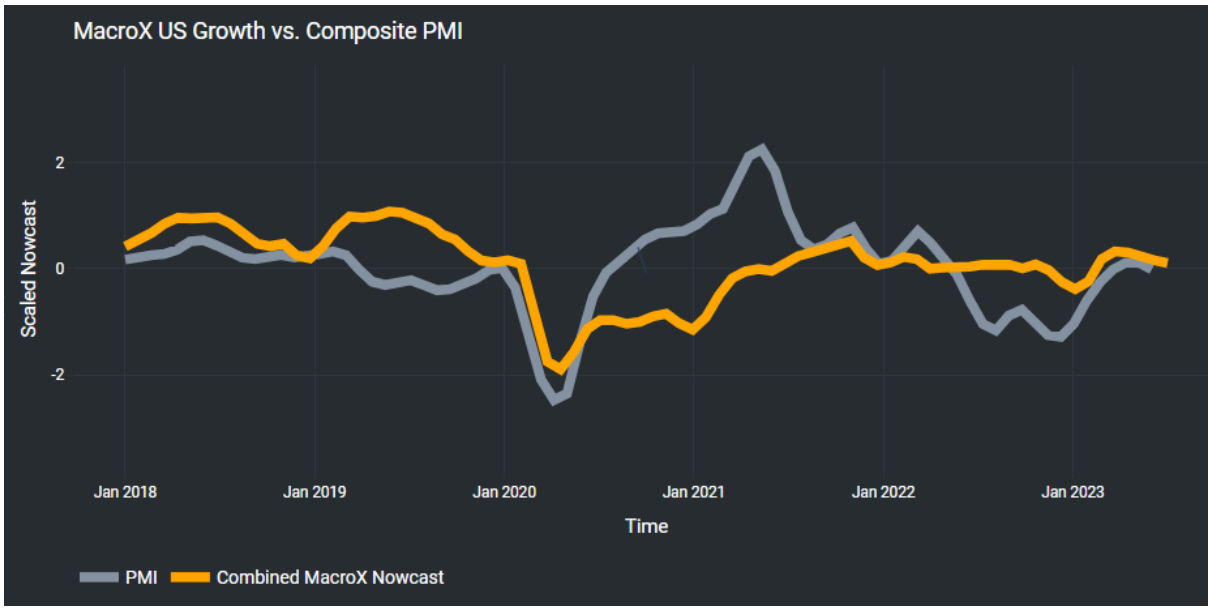
Don’t Wait for Godot Recession - Nowcast

Key Takeaways:

- A top recession predictor is flashing red – the US yield curve is massively inverted – yet there is no recession thus far
- Optimistic and pessimistic pundits make great points, but confused investors lose out – S&P500 returns are historically similar in yield-curve inverted and normal regimes
- Alternative data-based realism in the form of nowcasts resolves investor confusion
- MacroX’s nowcasts see a moderate slowdown but not much chance of a recession in the next 3 months



Our US growth nowcast shows that the economy is indeed slowing in June and July – but only modestly and from much higher levels than expected. Our real-time indicator is weeks ahead of PMI and months ahead of the rest of the US government data.

The "Most Anticipated Recession" Debate

Renowned financial journalist John Authers captures the current economic punditry zeitgeist well – "That the US economy is expected to plunge into a recession later this year, is perhaps the most anticipated downturn on record." (emphasis ours).

A 100% Chance?

And why not – the NY Fed's model shows a 67% chance of recession 12 months ahead and the conference board is a shade more pessimistic at 99% Anna Wong and Eliza Winger of Bloomberg also pinned the probability of a recession at a 100% late last year. Some pundits with prominent social media following such as MacroAlf and Jeffrey P Snider have also been in the high-probability of recession by now camp.

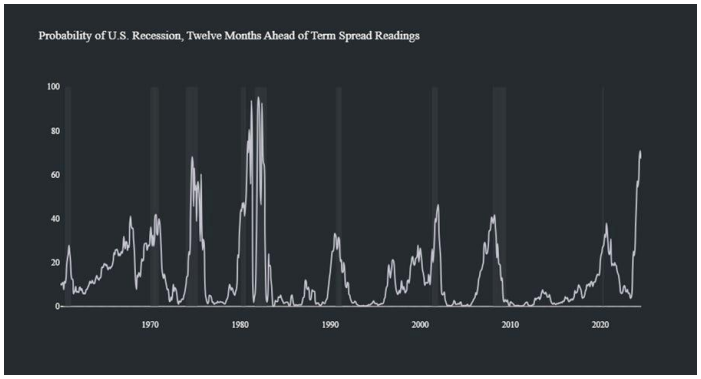


Figure 1: NY Fed's model shows a 67% chance of recession 12 months ahead

The Dissenters

Notable dissenters such as Mohamed El-Erian have consistently said that the economy – especially the labor market is fine and there is no reason for a recession unless the Fed makes a policy mistake. Goldman's chief economist Jan Hatzius has also lowered the odds of a recession to 20%.

As pundits debate, Authers notes that portfolio managers are sitting on the sidelines and losing out on the rally.

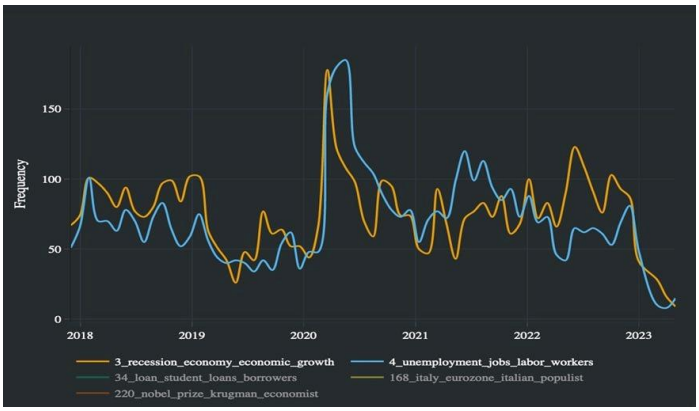


Figure 2: Our LLM news model shows financial media being less concerned about a recession recently. Source: MacroXStudio.

The Inverted Yield Curve – a Superstar Recession Predictor

Pessimists have cited "headwinds" such as tighter credit, dwindling household cash buffers, more pronounced labor-market softening, etc. In this noisy debate, the inverted yield curve has been the most cited indicator.

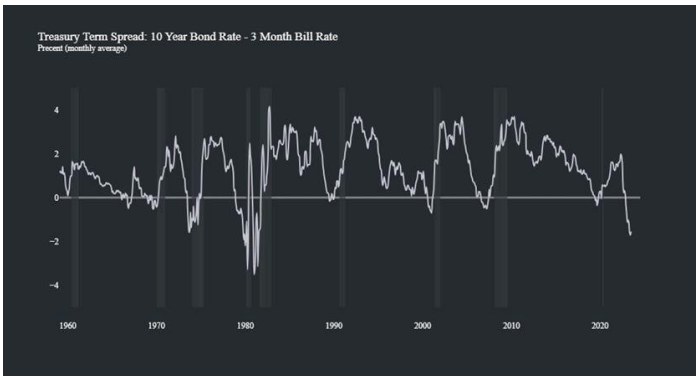


Figure 3: The yield curve slope has a good historical track record and is deep in negative territory. Source – NY Fed

Unfortunately, finance is full of studies that stop working after publication. Cochrane refers to a "zoo of factors" and Bailey and Lopez de Prado comment on

why finance research is “particularly prone to false discoveries.”

Against this dismal backdrop, the yield curve slope shines. Estrella and Hardouvelis published their seminal paper in 1991. Cooper et al. (Boston Fed) note that the predictive power of this indicator has stayed the same in the 1987 to 2009 sample.

The indicator can be computed simply as subtracting the short-end yield from the long-end yield (for instance, 10Y-3M yields that the NY Fed uses). Whenever this measure turns negative – meaning the short-term interest rates are higher than the long-term interest rates, a recession is anticipated.

No exact reason for why the indicator works has been established, but there are many reasonable channels. Cooper et al. note – "Yield curve aggregates information from a host of sources and captures investors' expectations about the economy's prospects." An inversion might be the result of a tight monetary policy working its way through the economy and cooling it down – perhaps painfully with SVB-type incidents or even flight-to-quality type purchases of longer-dated bonds.

But Good Prediction Doesn’t (Necessarily) Help Investing

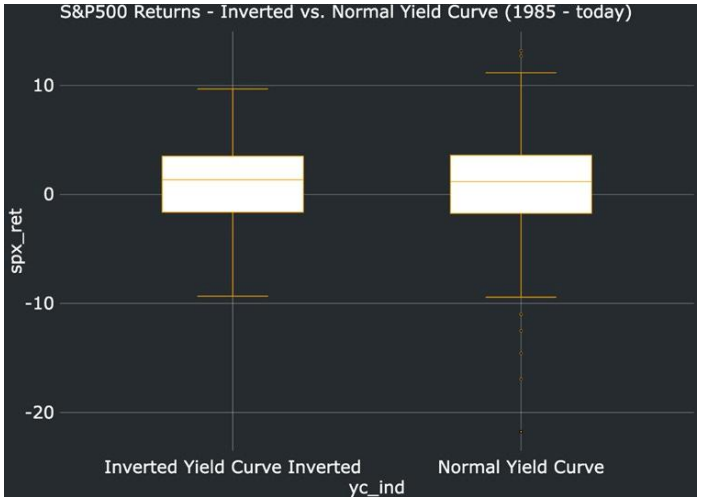


Figure 4: The distribution of S&P 500 returns when the yield curve was inverted is not significantly different from when it is inverted.

Since the yield curve does well on prediction, maybe we can use it for investment? Perhaps we could time the stock market? Maybe we could use it as a regime identification mechanism - exit the market when a recession is coming and re-enter when the danger is past.

We plot the distribution of monthly returns of the S&P 500 when the yield curve is inverted vs. not and find no significant difference. We run the following regression:

SPX Return (month i) ~ a + b Yield Curve Dummy(month i) + Error [1]*

The yield curve dummy is 1 if the yield curve is inverted and 0 if not.

Again, no significant results. It means S&P 500 on average generates about the same returns whether the yield curve is inverted or not. Regression of the yield curve slope yields similar results. Those relying on yield curve inversion as a simple, consistent, tradeable recession signal are likely to be disappointed. Why is that?

```
Call:
lm(formula = spx_pct ~ yc_dummy, data = yc_new)

Residuals:
      Min        1Q    Median        3Q       Max
-0.225256 -0.025021  0.003905  0.028169  0.124142

Coefficients:
            Estimate Std. Error t value Pr(>|t|)
(Intercept)  0.009368   0.003427   2.734   0.0065 **
yc_dummy    -0.001742   0.003427  -0.508   0.6114
---
Signif. codes:  0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1
```

Figure 5: A simple regression of S&P price change on yield curve inversion dummy is insignificant. Other versions of the regressions – such as using the slope instead of dummy yield similar results.

Let us ask the simple question:

"What is the probability of a recession 12 months ahead?"

The percent variance in predicting recession months that the yield curve slope can explain – in terms of the McFadden R2 is only 24% (1987 to 2009). A related fact is that the timing for the recession to begin after the yield curve inverts has a wide range -from 5 months in 1973 to 14 in 1980. Cooper et al. note that the indicator typically does not predict the beginning of the recession well.

This uncertainty of results is exacerbated by the many practical variations in constructing the indicator - instead of the 10Y vs. the 3M some use the 10Y vs. the 2Y, some count an inversion if the average over the months is negative while others even if one day is negative, and some suggest controlling for factors like tightness of the monetary policy relative to the neutral rate.

Can Real-Time Data Resolve the Dissonance?

Could both camps – one seeing a strong US economy and the other seeing a slowdown be partially right? Using alternative data and AI to generate a real-time US nowcast, we find: *The US growth data are turning down but from a higher level than was estimated, and there is sectoral heterogeneity.*

This growth level vs. slope confusion, and the sector performance dispersion, means that one can pick their favorite indicator and tell a reasonable story in either direction.

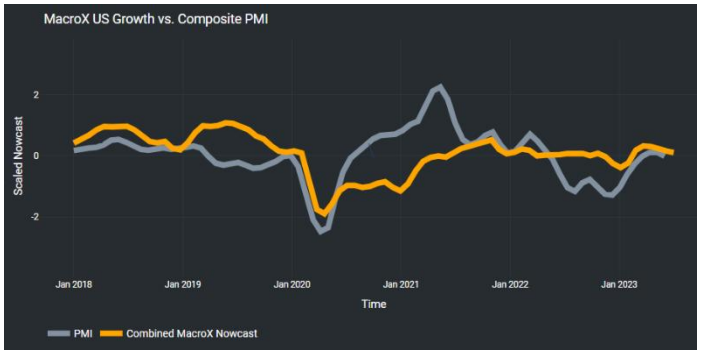


Figure 4: Our US growth nowcast shows that the economy is indeed slowing in June and July – but only modestly and from much higher levels than expected. Our real-time indicator is weeks ahead of PMI and months ahead of the rest of the US government data.

Sector Differentials – Slower Manufacturing vs. the Broader Strength

Figure 5: Combing various types of data provides a granular picture. Satellite nowcasts (dotted red) and Sensor nowcasts (dotted yellow) show that manufacturing is weaker. Social nowcasts (dotted light blue) and news nowcasts (dotted cyan) are broader in nature and show the overall economy is a bit better.

Diffusion Index Over Major US Cities Validates the Pattern

A "diffusion index" of major US cities shows slower growth in all of them, but Austin and LA have more pronounced downturns than SF & NY. All cities moving in one direction even with a smaller magnitude is typically a stronger signal than only a few moving but with a larger magnitude.

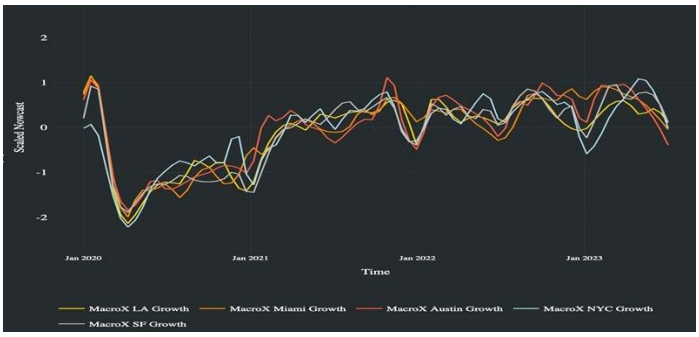


Figure 6: All major cities are turning down. However, SF and NYC are doing a bit better than LA and Austin.

High Labor Demand is a Big Support

A big reason for the strength has been the incredible demand for labor. Separating labor demand from labor supply and the wage-market clearing outcomes provides a clearer picture.

We find a similar pattern – manufacturing (red) and retail job demand (green) is weaker and turning down, yet healthcare (purple) is going strong. The overall labor demand (white) has ticked back up, implying strong support for the economy will continue.

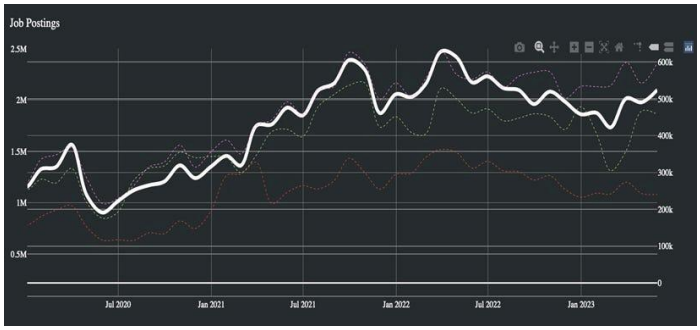


Figure 7: Overall job demand is still quite strong – providing a floor and healthcare in particular is hot. However, in line with other data - Manufacturing and Retail sectors are turning down.

Watch out for an Aggressive Fed Policy

If we were prognosticating, a potential source of recession would be a more aggressive Fed policy than is being priced in. If core US inflation proves sticky around 4% - which is what our models suggest – resulting Fed actions might result in a recession.

More Nowcasting, Less forecasting

Quant researchers Lopez de Prado and Lipton highlight three quant lessons from COVID-19. The very first one is - *"More nowcasting, less forecasting."* They suggest using unstructured datasets to make direct measurement or nowcasting the phenomenon in question. In our own research – we find that in addition to being months delayed, government data quality is significantly poorer during crises – exactly when investors care the most, increasing the value of real-time information.

Perhaps we have relied more on forecasts because the current measurements of such a complex system have been so noisy. But just as weather prediction gradually became more scientific via nowcasting, macroeconomics can too!