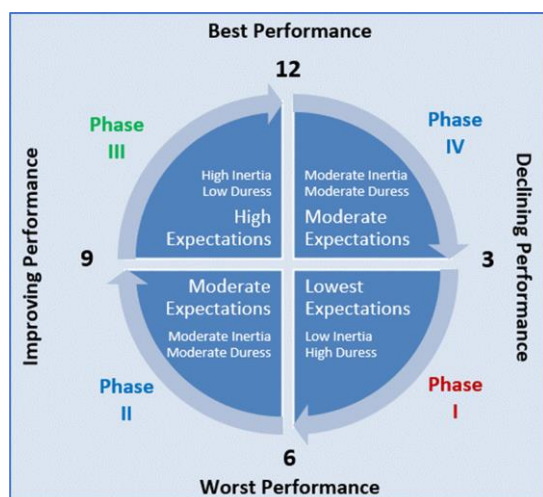


## Goldilocks Thinking on Inflation?

Is Goldilocks thinking taking over – not too soft, not too hard, but just right? Inflation has come down, the economy at least appears to be re-accelerating, and the market has taken off. Yet inflation expectations are rising, recent inflation readings are all up, and smaller companies are struggling.

It's difficult to maintain a balance between too much and too little growth to meet the Fed's inflation target, perhaps more so when unemployment is low. An accelerating economy could result in higher inflation, which causes the Fed to further raise rates or keep them high and thereby cause a recession, but a rise in unemployment claims could tip the economy into a recession as well (see last month's piece *Employment Isn't as Good as the Headline Implies*). My goal as always is to make you think one or two steps ahead and to recognize risk and opportunity when the market is ignoring them. We may have a soft landing, but it's also clear the market often does not recognize danger until it is facing it down.

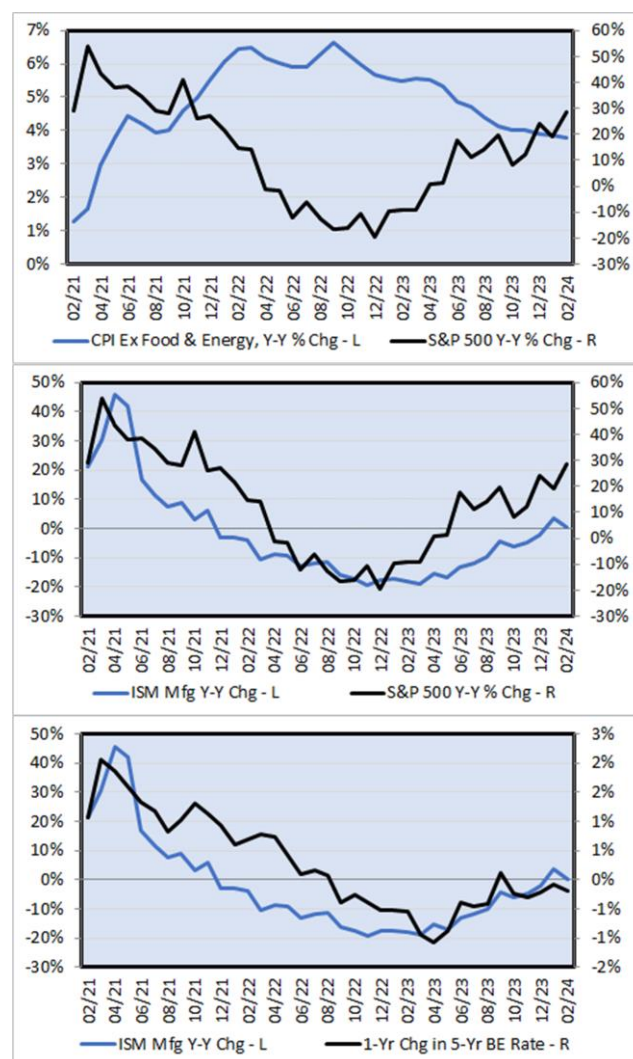
### The Expectations Clock – Phase III?



Spellman, Gordon Kevin (2009) *The Expectations Clock: A Model for Leadership, Reversion, and Over- and Under-reaction*. Durham theses. Durham University

The Expectations Clock suggests that when performance is strong and improving (Phase III), expectations are high. Inertia to the status quo is high and duress is low; however, the underlying fundamental cycle – economic, industry, or company-specific – is powerful, and Phase III (and Phase I) is when it is often wisest to be skeptical and cognizant of risks to the dominant view.

## Is the Market Pricing Best Outcomes? Lower Inflation and Bottoming PMI? Is it Ignoring How Inflation Expectations Also Bottomed?



ISS EVA, FactSet, DOL, ISM, S&P

## Don't Count on Fed Forecasts

Why do people put so much faith in the Fed? The best way to predict the Fed's *forecasts* is using *past* economic results. Their forecasts are **not** correlated or even **negatively** correlated with the future.

On March 20, Powell said "As labor market tightness has eased and progress on inflation has continued, the risks to achieving our employment and inflation goals are moving into better balance." Do you agree? This paper provides perspectives.

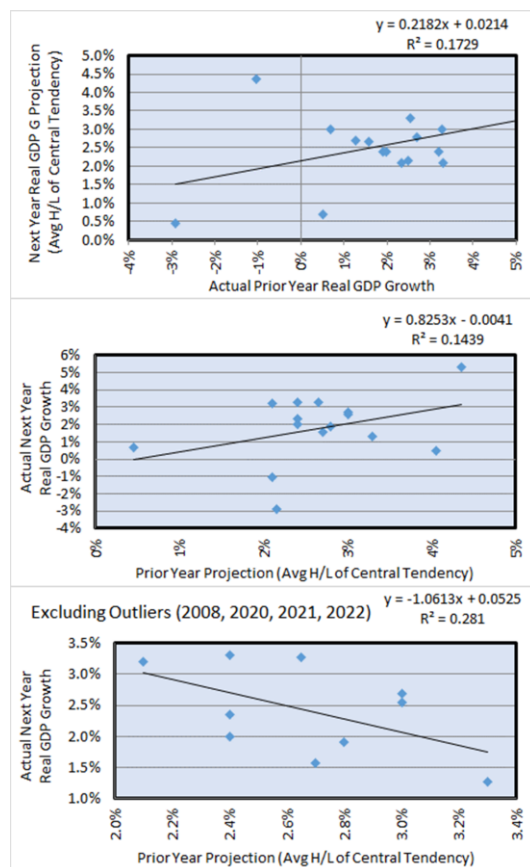
It wouldn't be the first time the Fed was too optimistic. [This is what I said](#) in April 2020 about inflation risks: "Powell says he is not worried about it (inflation), which worries me as he could be underestimating the risk." In July 2020, [I presented \(slide 19\)](#) various reasons why inflation could rise and how conditions then differed from when the Fed was stimulative post the GFC.

In December 2023, the Fed forecasted the PCE (Personal Consumption Expenditure) inflation to be 2.35% in 2024 (average of the high and low of the central tendency). In March 2024, the Fed updated this forecast to 2.50%. Real GDP growth was also updated from 1.45% to 2.20%. Estimates for growth were raised more than inflation expectations – was this too optimistic or reasonable? Since the Fed started releasing economic projections in 2007, the Fed has been – based on the latest forecast of the prior year – **on average 0.88% too high on GDP growth and 0.29% too low on inflation.**

On average, Fed is:  
0.88% too high on GDP growth  
0.29% too low on inflation

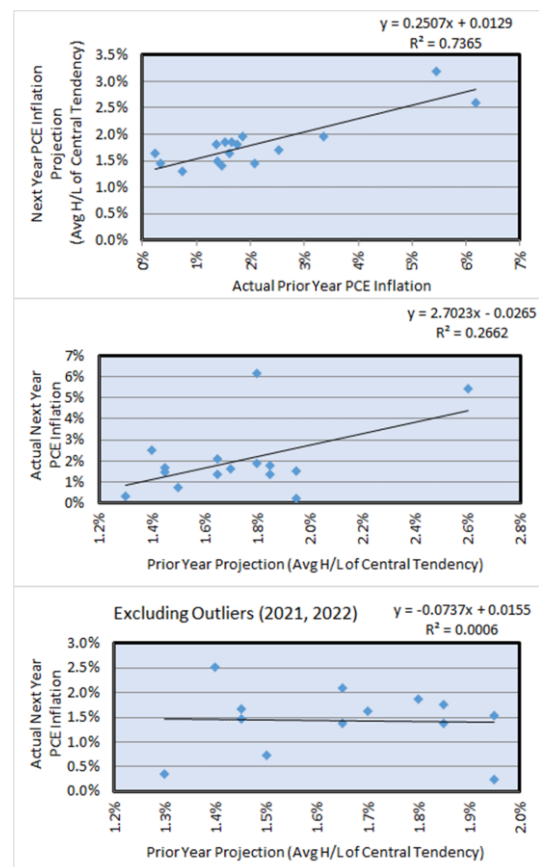
Excluding outliers, Fed forecasts (using the last projections during the prior year) for GDP are **negatively** related to future growth and Fed forecasts for inflation at best have **no** correlation with future inflation

### Fed Has Poor GDP Forecasting Record



ISS EVA, Federal Reserve, latest economic forecasts versus actuals

### Fed Has Poor Inflation Forecasting Record

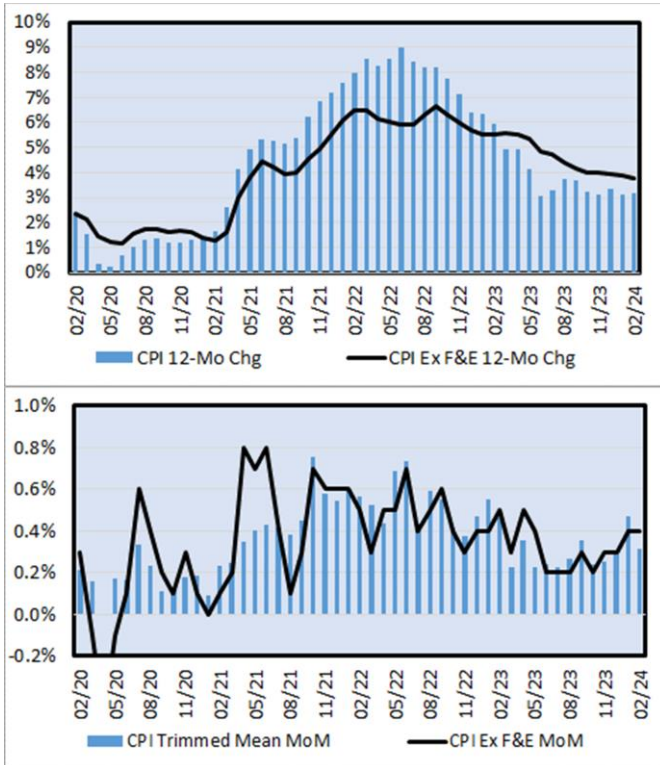


ISS EVA, Federal Reserve, latest economic forecasts versus actuals

## Most Inflation Indicators Have Turned Up

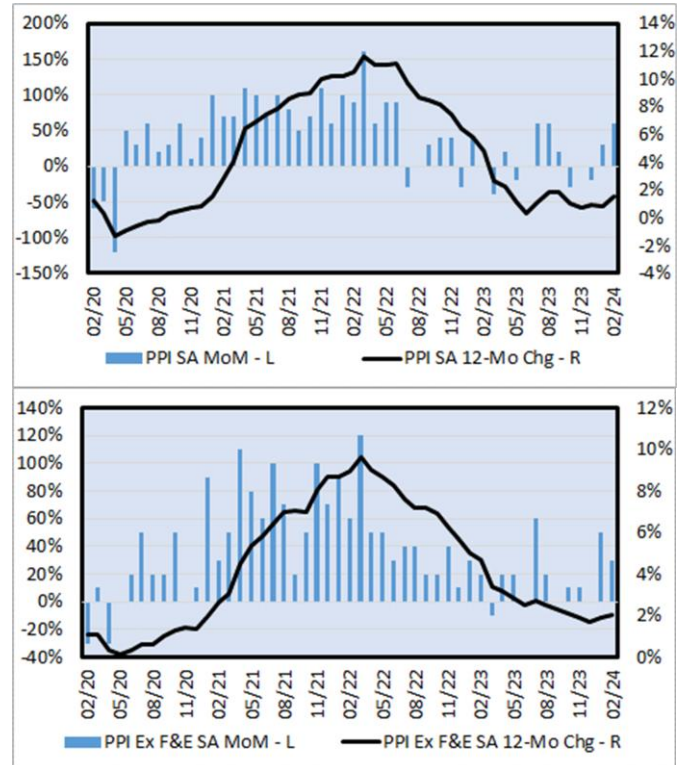
The inflation rate has declined, but most measures show that deceleration is slowing or perhaps inflation is even turning up. The month-to-month changes in CPI and PPI are hooking up and leading to the annual rate of CPI inflation stalling its decline at about 3%. ISM manufacturing and services PMI surveys for price confirm this trend as they recently moved up (not shown).

### Core and Trimmed CPI MoM Hooking Up



ISS EVA, FactSet, Federal Reserve, DOL

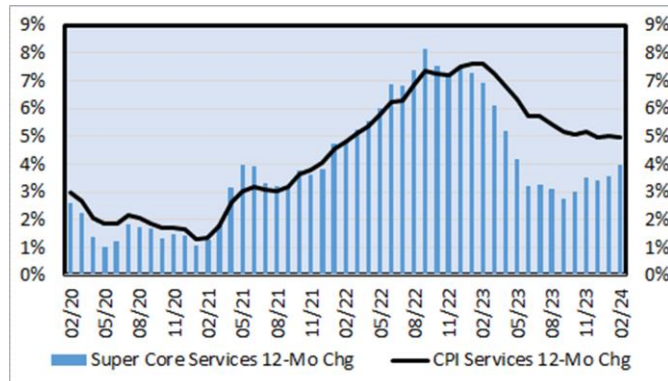
### PPI Deceleration Stalled and MoM Up



ISS EVA, FactSet, DOL

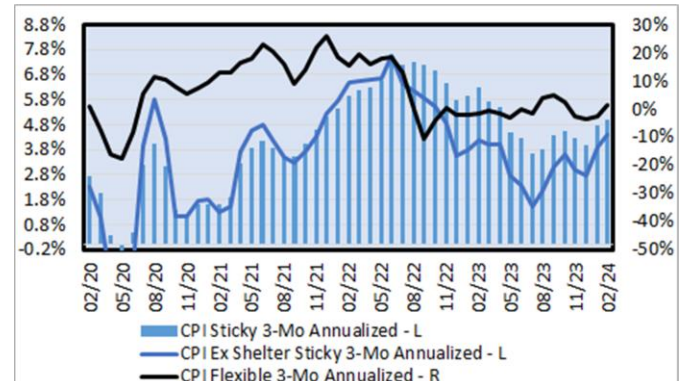
Some say not to worry, as inflation is high because of housing. Unfortunately, the super services inflation, which strips out housing, has re-accelerated. Also, the Atlanta Fed's sticky inflation, with and without shelter, is on its way up and flexible inflation has stopped its deceleration.

### Super Core Services Hooking Up



ISS EVA, FactSet, DOL

### Sticky Inflation Hooking Up



ISS EVA, FactSet, Federal Reserve



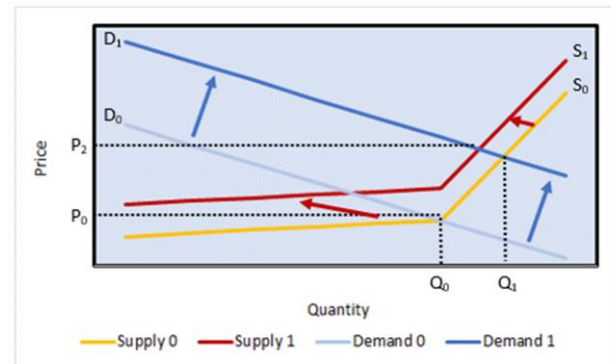
## Why the Rapid Decline in Inflation and Then the Stall?

Inflation was primarily caused by stimulative Fed and fiscal policies lasting for too long. Inflation soared in 2021-2 as too much demand (too much stimulus and too low interest rates that drove  $D_0$  to  $D_1$ ) chased too little supply – as the economy was running at full capacity at the kink in the supply curve before COVID-19 (the unemployment rate was low and capacity utilization was high) – which was exacerbated by supply chain problems ( $S_0$  to  $S_1$ ). Plus, spending soared for goods – only about 1/3<sup>rd</sup> of personal consumption expenditures – instead of services. We couldn't go out to eat, on vacations, and to the doctor (unless we had COVID-19), so we had much more to spend on goods.

Inflation started in goods and then went to services as wage growth rose, the unemployment rate plunged, the quits rate soared, and workers demanded higher wages to compensate for inflation. Wages then drove up services inflation, as salaries are the main costs for the services industry. Over 2023, what was out of balance started to reverse. Excess consumer cash dwindled, interest rates rose (besides fixed-rate mortgages and long-term debt), and supply-chain problems were fixed. Now, PMIs have bottomed out (see bottom right graph on page 1), and unsurprisingly, inflation has as well.

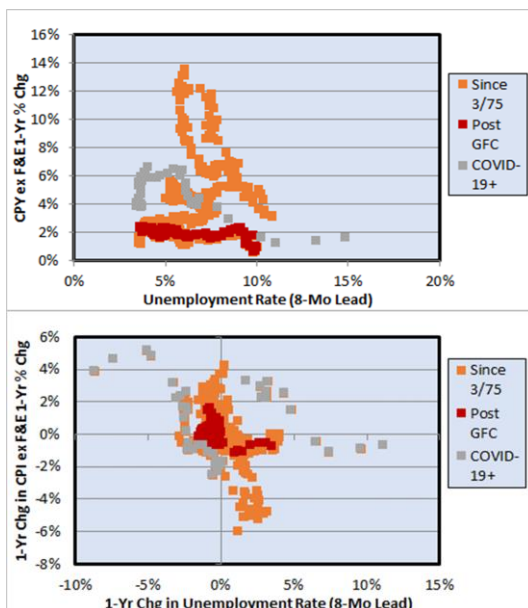
I've heard it argued that the Phillips Curve is dead, but that's not quite right. The curve describes the inverse relationship between unemployment and inflation. Depending on individual cycles, the level of unemployment (8-month lead) has low, at best, negative correlation with inflation (chart below on top left). This is probably due to various secular trends (globalization, technology, etc.) offsetting this cyclical relationship. On the other hand, *change* in the inflation rate is more clearly inversely related to *change* in the unemployment rate (bottom left). Unemployment matters even more for wage growth (right graphs). So, a key to lower inflation is rising unemployment (a recession works well). The job-opening-to-unemployment ratio has declined from over 2 to 1 to 1.4 to 1, so we are getting there on inflation, but maybe we'll soon worry about employment.

### Higher Demand along with Constrained Supply Caused Prices to Soar and Is Now Reversing



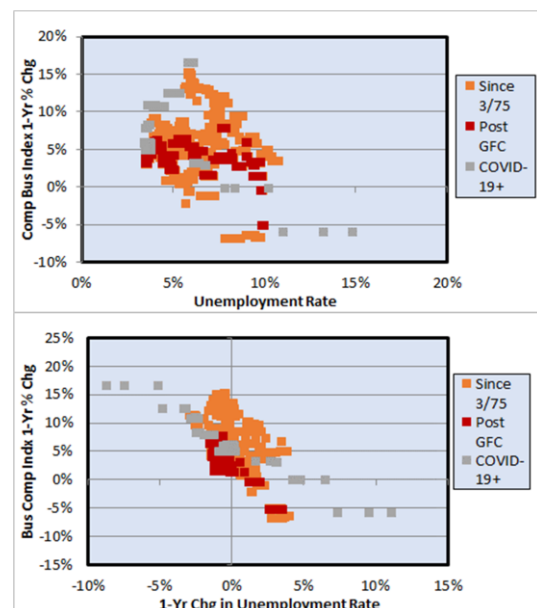
ISS EVA

### $\Delta$ in Unemploy. Neg Corr. with $\Delta$ in Core CPI Infl.



ISS EVA, FactSet, DOL

### $\Delta$ in Unemploy. Neg Corr. with Wage Growth



ISS EVA, FactSet, DOL

# The Good News and Bad News on Drivers of Inflation

## Good News: Wages

Wage inflation leads to services inflation, and it looks like services inflation is still set to come down a little bit more.

## Bad News: Wages

Wage inflation has slowed its decline and is even hooking back up. The monthly change in private average hourly wage growth was 0.2% in February 2023. While February 2024 was only up 0.1%, October, November, December, and January were 0.3%, 0.4%, 0.3%, and 0.5%, respectively.

Wages slowed as the labor force growth and nonfarm payroll became balanced. This did not last. The last three months saw the labor force grow between 47,000 and 132,000 slower than employment and this may be pushing up wages.

Eventually, once the job-opening-to-unemployment ratio gets to 1.0 (see last month's piece), unemployment may rise and fix this wage problem, but that fix could result in a recession.

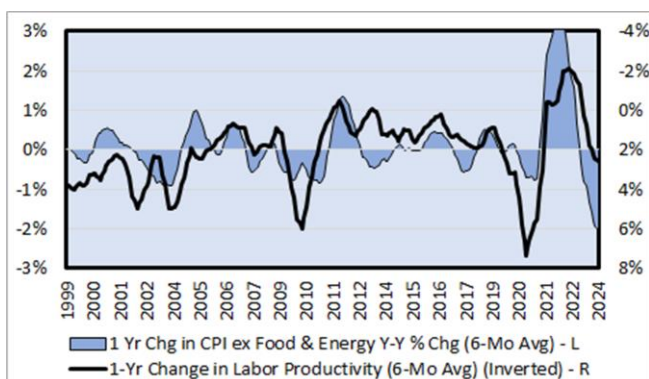
## Good News: Productivity

Productivity has rebounded, which means employers do not have to raise prices as much to offset these wages. Perhaps employers are willing to hike wages if workers are more productive.

## Bad News: Productivity

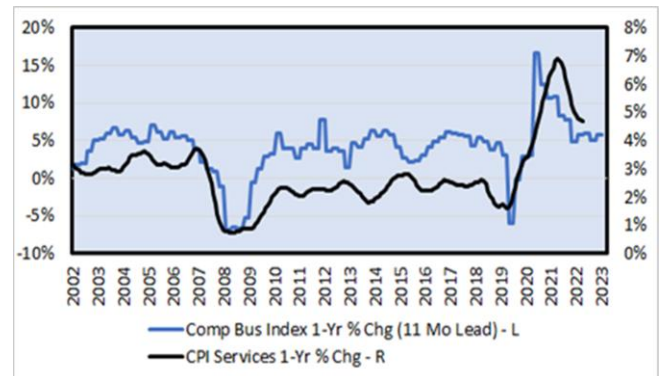
What caused productivity to rise? Is this sustainable? I doubt AI is the cause of the productivity boost – it's too early in the AI cycle to lead to this significant increase in productivity. Typically, productivity rises as unemployment rises (i.e., in a recession, workers work harder), but the unemployment rate is still relatively low.

## Productivity Spikes and Inflation Slows



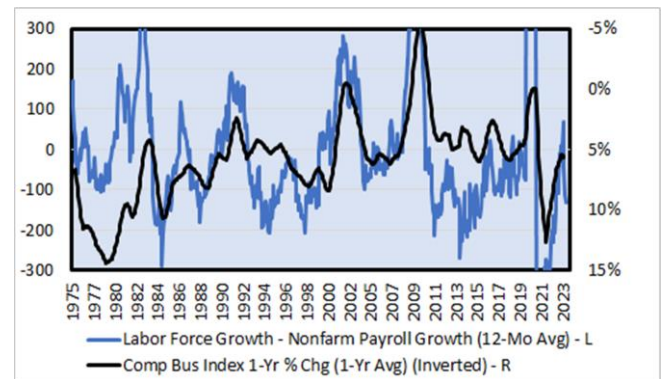
ISS EVA, FactSet, DOL

## Wage Growth Leads Services Inflation



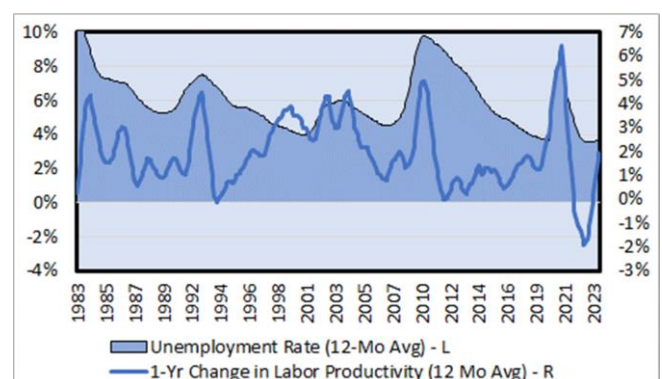
ISS EVA, FactSet, Conference Board, DOL

## Net Supply of Labor and Wages Inversely Correlated



ISS EVA, FactSet, DOL

## Productivity Spikes with Unemployment



ISS EVA, FactSet, DOL

## The Good News and Bad News on Drivers of Inflation

### Bad News: Productivity continued...

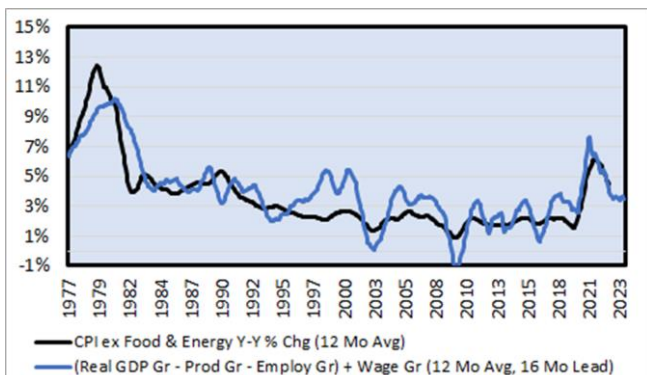
The increase in productivity may be temporary. At least until AI transforms the service industry, it is easiest to make productivity gains in the goods (durable and non-durable goods) industries. As noted earlier, during COVID-19, there was a big ramp up in spending on goods and a rise of unemployment, both leading to a surge in productivity. As the economy opened, productivity fell as employees were added and consumers shifted spending to services. Recently, spending shifted again to goods and productivity naturally rose. Goods spending was 34.8% of overall personal consumption expenditures in January, compared with 32.4% in February 2020, before COVID-19 broke out.

The quits rate also impacts productivity. Typically, the quits rate declines during a recession, but this time it is declining during a recovery. The great resignation period of 2021-22 caused productivity to decline because as people switched employment they were less productive early in their new jobs. For example, it took me 15 minutes to receive my Subway sandwich a few weeks ago and I was first in line. I felt sorry for the high school worker who was manning the shop and clearly did not understand what needed to go on my ham and cheese sub. Last week, he assembled my sandwich in half the time so productivity improved, but we are moving closer to the limit...

### Good News: Combining Wages, Productivity, and Employment Growth

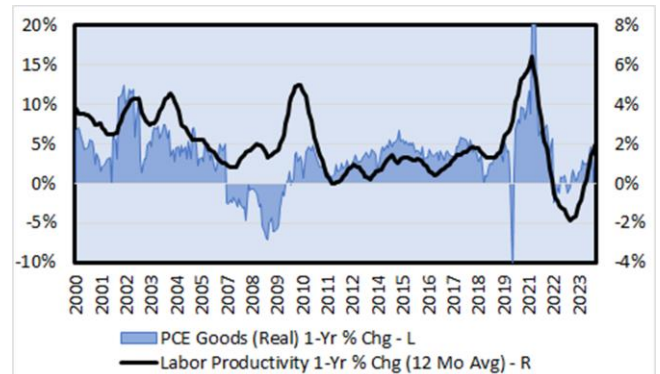
Looking at the figure below, inflation should continue to slow, taking into consideration growth of real GDP, productivity, employment growth (see figure on right), and wages.

### Inflation Model: Inflation Set to Slow Further



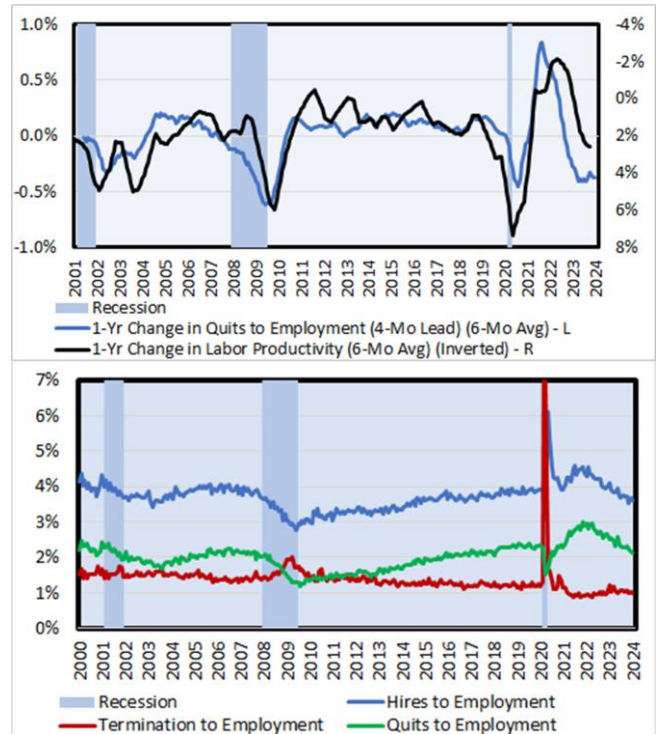
Spellman, FactSet, BEA, Conference Board, DOL

### Productivity Spikes as Sales of Goods Rises



ISS EVA, FactSet, BEA, DOL

### Productivity Spikes as Quits Slow



ISS EVA, FactSet, DOL, NBER

### Bad News: Combining Wages, Productivity, and Employment Growth

Employment gains are slowing, productivity may slow, and wages are hooking up, all of which means the model (left) has stopped declining at a level consistent with core CPI growth greater than 2%. This is unless GDP slows substantially, but the implications of this, again, are perhaps a recession...



# The Good News and Bad News on Drivers of Inflation

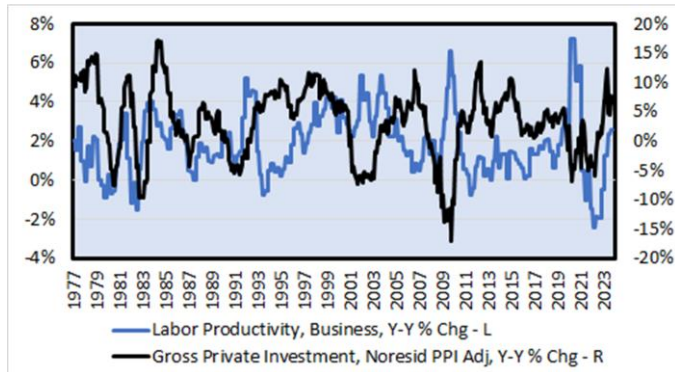
## Good News: Investment

Investment has accelerated. Boosts in private non-residential investment have been associated with higher productivity over the long-term.

## Bad News: Investment

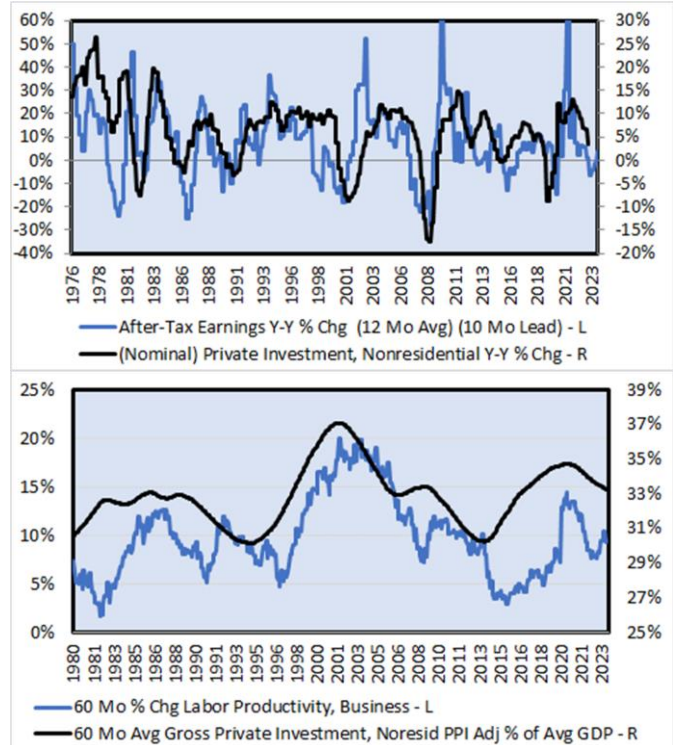
In the short-term, investment is normally associated with lower productivity. If more capital is accompanied by higher

## Short-Term, High Investment Spending is Associated with Lower Productivity



ISS EVA, FactSet, BEA, DOL

## Investment Ramped Up & Follows Earnings → Long-Term the > Investment → Higher Productivity



ISS EVA, FactSet, BEA, DOL

employment without commensurate higher demand (as it is added at peaks of cycles), then this leads to lower productivity.

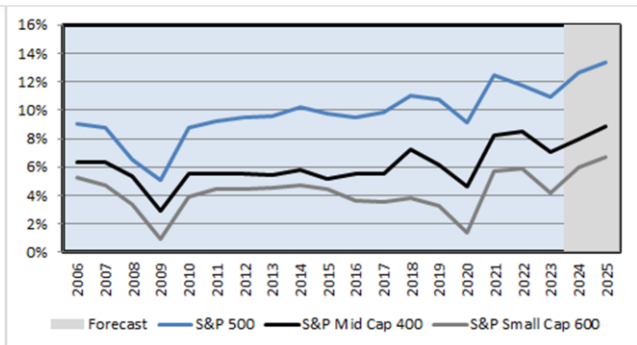
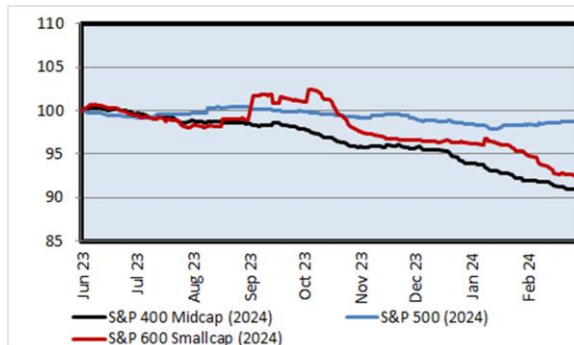
## Good News: Earnings Growth

Earnings growth is expected to accelerate

throughout 2024 and into 2025 and margins are also expected to rise. Maybe this gives firms a breather and they don't have to raise prices?

## Earnings Growth Slowed and Estimates Down, But Growth Expected to Accelerate

Index	Quarterly Y-Y EPS Growth									
	2023/1C	2023/2C	2023/3C	2023/4C	2024/1C	2024/2C	2024/3C	2024/4C	2025/1C	2025/2C
S&P Composite 1500	-7.8%	-5.4%	4.4%	3.7%	2.0%	8.2%	8.0%	17.1%	15.6%	14.0%
S&P 500	-5.9%	-3.8%	5.9%	3.9%	2.9%	8.6%	7.6%	17.3%	15.2%	13.9%
S&P Mid Cap 400	-18.4%	-18.1%	-8.6%	0.7%	-10.5%	1.1%	11.5%	11.4%	19.8%	17.1%
S&P Small Cap 600	-29.1%	-17.7%	-11.4%	-2.8%	1.2%	12.0%	13.3%	28.3%	21.0%	16.3%



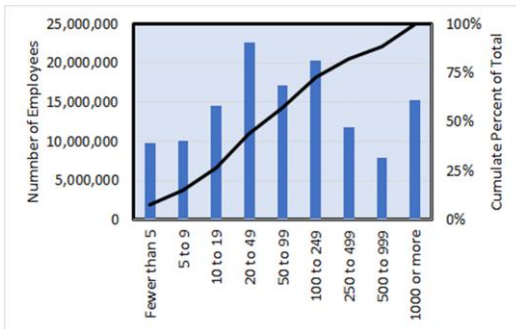
ISS EVA, FactSet, BEA, DOL

# The Good News and Bad News on Drivers of Inflation

## Bad News: Earnings Growth

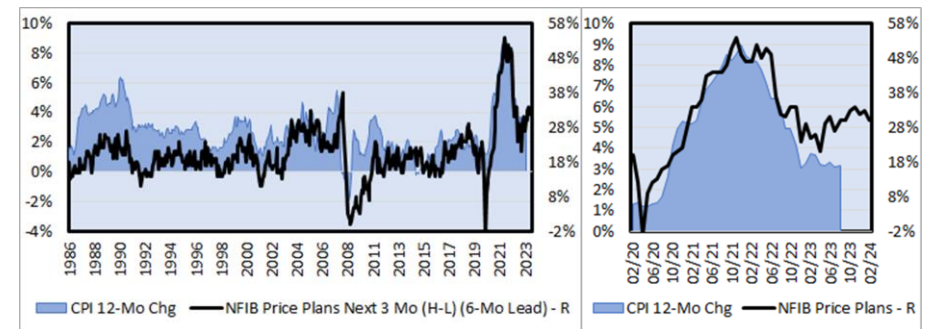
Earnings estimates are declining, especially for smaller companies. Mid- and small-cap companies experienced negative growth in 2023, and small companies employ the majority of workers. Since earnings lead investment, this could mean lower investment and therefore employment in 2024, and if GDP is unchanged, higher inflation. Or, it means lower employment, it could just mean lower GDP. Still, estimates (prior page) call for small-cap companies to have the highest 2024 EPS growth and rising margins in 2024. Is this because they will raise prices (see hook up in bottom right graph below)?

## Small Firms Employ Most People



ISS EVA, BLS, March 2023

## Small Firms Plan to Raise Prices, and This Leads Inflation

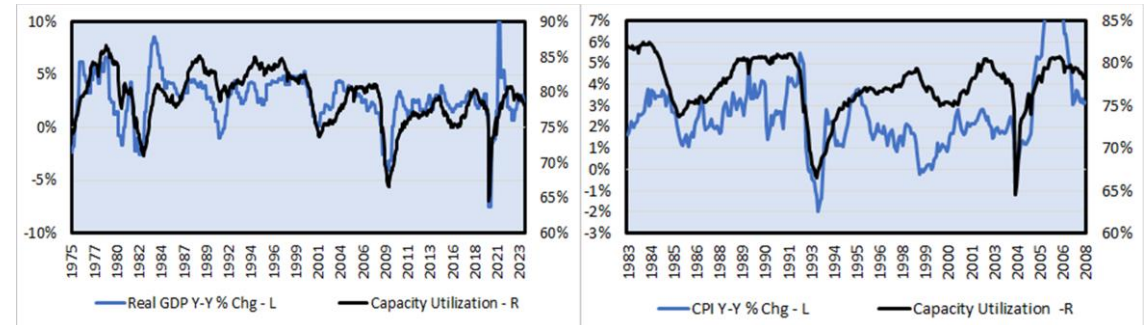


ISS EVA, FactSet, NFIB Small Business Economic Trends, DOL

## Good News: Utilization

Capacity utilization is coming off its highs. Investment spending has been quite robust as firms have perhaps added capacity to deal with supply chain issues. Lower capacity utilization is associated with lower inflation.

## Capacity Utilization Has Come Down and Is Correlated with CPI

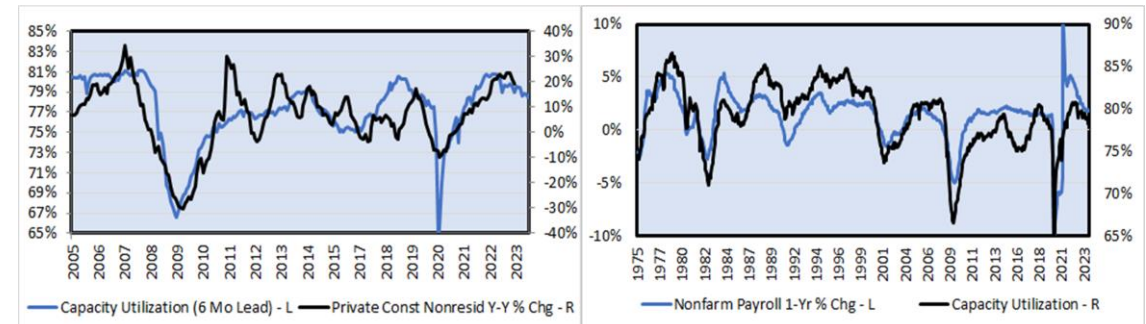


ISS EVA, FactSet, BEA, DOL, Federal Reserve System

## Bad News: Utilization

Lower capacity utilization leads to lower investment spending. Lower investment spending leads to lower employment and inflation. So, this is good for inflation, but not necessarily for employment.

## Capacity Utilization Leads Investment and Is Correlated with Employment Growth



ISS EVA, FactSet, Federal Reserve System, US Census Bureau, DOL



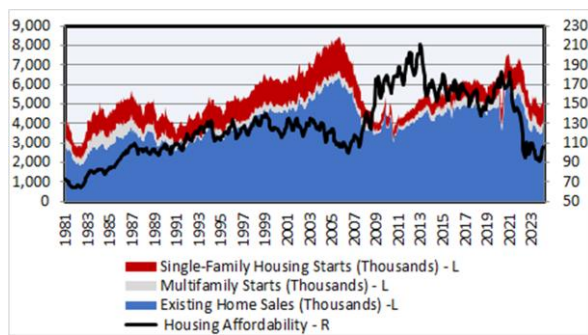
# The Good News and Bad News on Drivers of Inflation

## Good News: Housing

Shelter inflation has come down with a delay to the decline in CPI growth. **Going forward, due to a new supply of apartments (relatively strong) and slowing prices of homes (leads rents), most people expect shelter cost inflation to continue to slow.**

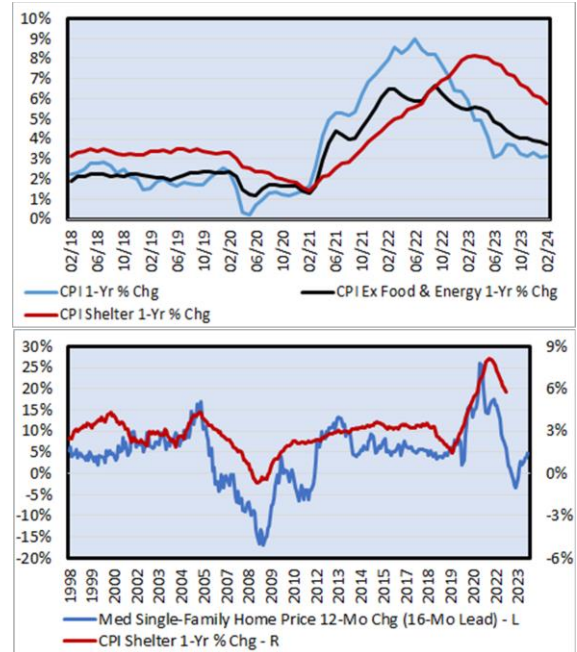
Shelter contributes 36% to CPI, but should it? About 2/3 of adults own homes, and have costs really gone up given that most have fixed-rate mortgages that were refinanced at lower rates than today?

## Total Starts Declining and Affordability Low



ISS EVA, FactSet, National Association of Realtors, US Census Bureau

## Shelter Inflation Decelerating, But for How Long?



ISS EVA, FactSet, DOL, National Association of Realtors

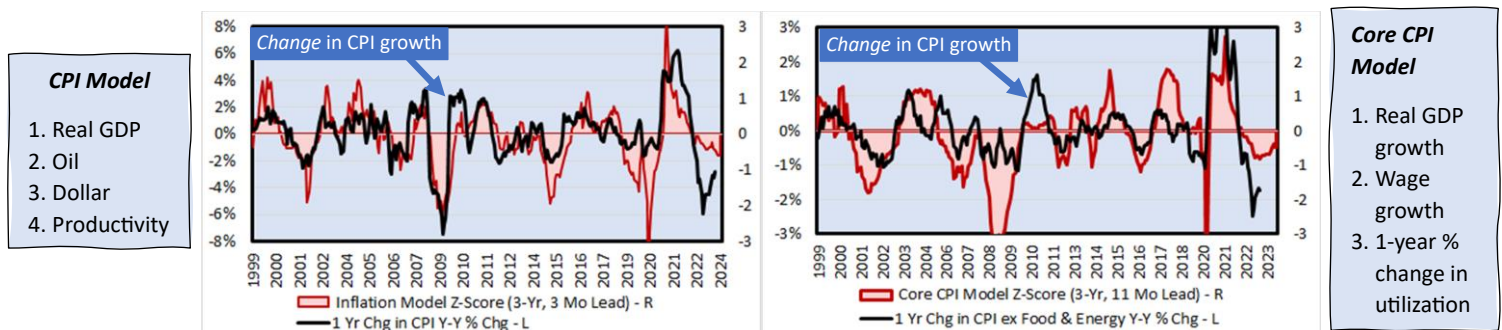
## Bad News: Housing

While the number of apartment units being built is up (off highs in 2022, which were last seen in the 1980s), demand may be strong because fewer people can afford a home. **The housing affordability index, which measures whether a typical family can afford the typical home, is at about a 35 to 40-year low as both home prices and mortgage rates are up. People are either stuck in their homes in order to hang on to a low mortgage rate or must pay up for a new home or purchase a smaller one.**

## Good News: Inflation Model

My core and overall CPI models are negative and correlated with change in inflation. They include weighted (proprietary) Z-scores of factors for demand, supply, commodity prices, and the dollar. Hopefully, we hit 2% CPI before the deceleration in CPI growth moves to zero.

## Inflation Models Negative but Core Model Hooking Up



Spellman, FactSet, BEA, Conference Board, CRB, DOL, Federal Reserve

## The Good News and Bad News on Drivers of Inflation

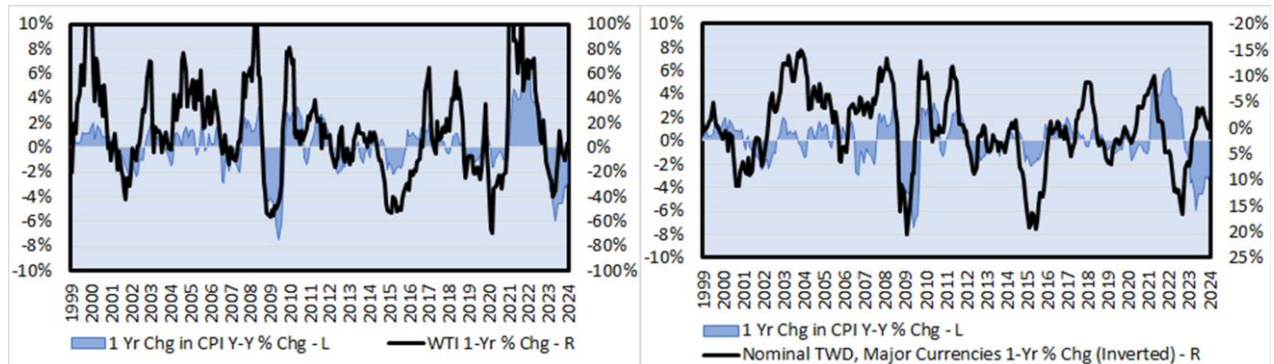
### Bad News: Inflation Model

The core CPI model has hooked back up since March 2023 (Z-score of -0.47 in February 2024 vs -0.80 in March 2023) in response to a large pick up in the Z-score for change in the 12-month average growth in wages, which is more than offsetting a somewhat lower Z-score for real GDP growth and a lower Z-score for change in capacity utilization.

Since March 2023, the overall CPI model has fallen (Z-score of -0.61 in February 2024 vs -0.27 in March 2023). It has made the biggest gains due to productivity growth and somewhat for real GDP. As discussed earlier, recent gains in productivity may be due to temporary drivers before the onset of AI-driven productivity improvements, and a lower Z-score for real GDP implies lower growth.

The dollar and WTI oil prices are offsets to the decline in the overall CPI model. Please note that the model inverts the dollar as a lower dollar results in higher inflation (e.g., higher import costs). While the dollar index is essentially unchanged since March 2023 to February 2024, its difference versus its volatility adjusted three-year average (its Z-score) has risen. A higher Z-score may reflect a rising risk-appetite associated with forecasts of an improving economy as the dollar is a risk-off asset. The Z-score for WTI oil prices has also moved up somewhat. Oil prices are driven by demand and supply, investors' attitudes, and the dollar. Oil and the dollar are inversely correlated, so the higher Z-score for the dollar and the higher Z-score for WTI are consistent. Regarding demand and investor's attitudes driving oil prices, its higher Z-score perhaps reflects an improving economy or at least positive forecasts of better economic growth. This appears to be good news, except if it means higher inflation which causes the Fed to stay restrictive and drive the economy into a recession, which is bad news.

### Oil Prices Are Positively and the Dollar is Negatively Correlated with Inflation



ISS EVA, FactSet, CRB, DOL, Federal Reserve

*This paper provided a review of good news and bad news for drivers of the change in the inflation rate, and the change in the inflation rate **was** the big debate. Given the rising stock market and narrow credit spreads, it seems that inflation heading to 2% is the consensus and so is a soft landing. I'd suggest that, on both accounts, it still isn't that clear cut and risks remain.*

*If you have questions, don't hesitate to contact me. Love to chat.*

*Also, if you are looking for a student with a good attitude for an internship or a full-time role, I'll find you someone. Believe me, my students are great. For example, the catalyst for the comments earlier on why productivity recently rebounded, which is somewhat at odds with what's usual at this point of the economic cycle, came from class discussions...*

*Have a good day!*

*Coach*



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