Stephens
Investment Management Group®

*The following contains a brief discussion of the equity markets from Chief Investment Officer and Senior Portfolio Manager, Ryan E. Crane.*

# THIRD QUARTER 2024
# MARKET OUTLOOK

## MARKET OVERVIEW [1]

A lot happened in the last three months. There were two separate assassination attempts on former President Trump. President Biden either stepped out or was forced out of the contest, with Harris getting the nomination without any real process. Conflict escalated in the Middle East. The Yen carry trade blew up and sent markets into a brief tailspin. Investors switched between questioning the utility and duration of AI enthusiasm to being super bullish. Economic data showed large negative revisions to job data, but also slowing inflation. That combination gave the Fed enough to cut Fed Funds by 50 basis points, and the market seemed to love it.

With that bumpy ride, the S&P 500® managed to get back to new highs by the end of the quarter. Small cap stocks garnered all the attention in July. Softer CPI readings gave investors confidence on rate cuts, which many believe disproportionately help smaller companies. After playing second fiddle to large caps and the so-called Magnificent Seven for so long, it seemed like we were due for a shift in sentiment.

It's still not clear if we are free from the risk of a recession or of further inflation. On the surface, the economy seems OK for now, but it's becoming clearer that there is growing disparity across individuals and companies alike, for a myriad of reasons.

## OUTLOOK

A client recently asked me, "Where are we in the economic cycle?" To answer that question, a reasonable person might look at equities, the yield curve, Fed policy, gold, oil, and a combination of economic statistics like GDP growth and unemployment. Strangely, those metrics seem to be pointing to different answers. Being the cynic that I am, my response is another question, "Are we allowed to have cycles anymore?"

It seems as if recessions are simply unacceptable; policy makers will do almost anything to avoid them. I've argued for years that while painful and damaging, recessions aren't *strictly* negative. My favorite analogy is a forest fire. It seems obvious that no one wants a forest fire. To fight off the risk of wildfires, the US Forest Service launched a campaign with Smokey Bear, and it was largely successful. Eventually, we came to realize by all but eliminating forest fires, the forest became unhealthy and more vulnerable to much worse fires because of accumulations of too much dead material and diseased trees. It turns out that forest fires are part of the natural cycle, killing off old, dead plant life and making room for renewed growth. Today, the Forest Service conducts controlled burns on a regular basis. Something tells me that Chairman Powell isn't going to prescribe a controlled burn.

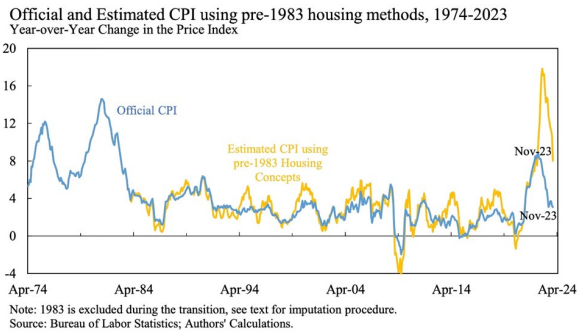
I'm sure this won't surprise any regular readers, but I'd like to revisit inflation one more time (and I'm sure this won't be the last). To start, let's review some of the hypotheses I've proposed in the past.

1. CPI understates inflation, or at least the cost of living, because hedonic adjustments relate the change in price of a good back to the prior standard of living.
2. CPI understates inflation because interest rates and financing costs are not directly included.
3. CPI understates inflation because of the allowance of substitution (resulting from changes to the methodology in 1980 and 1990).

Earlier this year, I referenced Larry Summers, et alia, and their working paper, where they estimated that CPI peaked in the high teens and was about 9% in November of 2023 (versus the official level of 3%). That's a spread of 6%. With interest rates lower today than last November, we could conclude that spread is a little narrower. I'm not sure where Summers' calculation would put us today, but my guess is in the vicinity of 5%.

[1] *The S&P 500® Index is a broad-based unmanaged index of 500 stocks, which is widely recognized as representative of the equity market in general. Copyright © 2024, S&P Global Market Intelligence (and its affiliates as applicable). All rights reserved. See additional information regarding S&P ratings at https://www.stephensimg.com/terms-and-conditions/. You cannot invest directly in an index.*

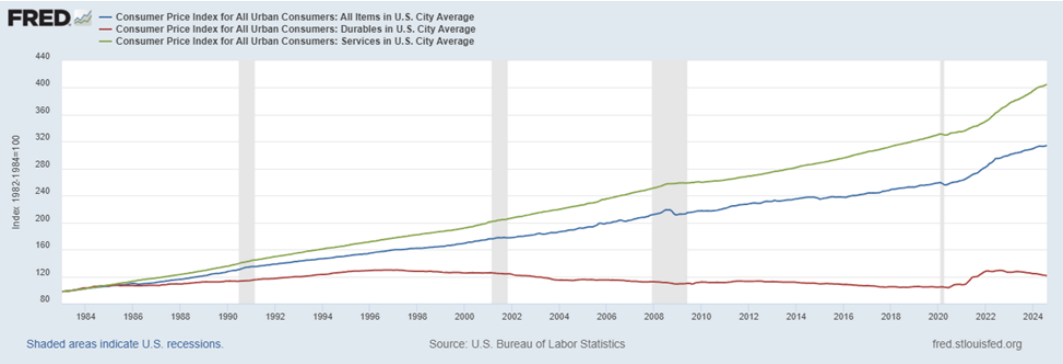
*Figure 7*




Without spending too much more time on that subject, let the record show that I wholeheartedly believe that CPI understates actual inflation for various reasons. What I do want to spend time on is deconstructing whatever level of inflation we have into the forces driving inflation and those reducing it.

Milton Friedman famously said that “inflation is always and everywhere a monetary phenomenon.” While this might be an oversimplification, I would contend that this is largely true, and that over the long term, inflation is driven by government spending and debt. Since the Great Financial Crisis, I have worried about inflation. I used to argue that surely rates at zero and the Fed monetizing the government debt would ultimately create inflation. Year after year passed and CPI simply did not reflect my hypothesis.

Prior to COVID, I had spent some time looking into the split in inflation between goods and services. The idea was that for things where capital was the primary input, there were significant deflationary forces at play. Capital was essentially free with rates near zero; and for things where skilled services were involved, there was no real benefit of cheap capital. Here’s a chart of inflation (indexed to 100 in 1983) for goods and services.



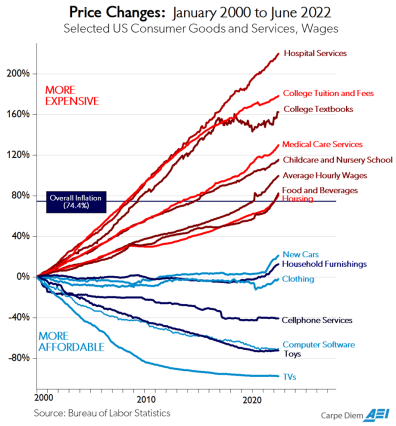

The data started to diverge almost immediately, but it was about 1996 when goods actually had a deflationary impact – having year over year declines – and that lasted all the way up until COVID.

I’d like to refine that hypothesis. It’s not just about cheap capital, it’s also about technology and innovation. My main gripe on hedonic adjustments to CPI is that while they try to capture the impact of improvements in functionality and utility, the net result is to re-price that back to old technology. No one buys the old technology. We all use iPhones. The Bureau of Labor Statistics tells us that smartphones only cost 45% of what they did in 2019, meaning that prices have *deflated* by 55% in just 5 years. But we all know that the nominal price of an iPhone is higher today.

This time last year, I wrote about this effect and how it reveals the imperfections and trade-offs which must be dealt with when attempting to measure inflation. Today, I’d like to explore just how powerful technological advancements can be in terms of deflation. Moore’s law has done wonders for our economy and our standard of living. The innovations and technological achievements that directly or indirectly result from semiconductors have been transformative.

Look at how the index for goods starts declining in 1996 which happens to coincide with the beginning of the economic impact of the Internet. Since then, we've had a steady run of innovation which has spurred productivity, enabled global competition, and allowed for much more competition and price transparency, just to name a few things.

While this has been a massive effect, it is not uniformly distributed across the economy. At one end of the spectrum you have TVs where the deflation has been shocking. In 2002, a 52" plasma television could cost as much as $10,000. By today's standards it was garbage. A much better version of a TV the same size can be purchased for $198 today. Don't forget that just stated inflation levels would equate $10,000 in 2002 to $17,500 now.




Economists are usually very careful to use the word "inflation." It describes a rise in the price level or a deterioration in the purchasing power of the currency, not changes in relative prices. *Some* things getting more expensive isn't necessarily inflation in the strict definition. This is why up until 2021, economists weren't really worried about inflation. They weren't seeing it in the strict sense of the word.

I don't think it's a stretch to say that technological advancements and innovation have been happening at an increasing pace throughout all of recorded history. And the advent of the semiconductor has brought about an inflection and exponential increase over the last 25+ years . Despite predictions to the contrary, there is no clear evidence we have found the limit of these advancements or the loss of scale yet.

Innovations are deflationary. Advancements like the internal combustion engine resulted in massive boosts in productivity and that helped keep inflation at bay. The personal computer, the Internet, and the cell phone have all had profound impacts on the economy, our standard of living, and inflation. It is difficult to measure the exact magnitude of these effects, but the direction is quite clear. I don't just mean the deflation we've had in the cost of TVs and computers or the massive improvements in bang-for-the-buck with smart phones and cars. I'm just as focused on the productivity gains that result from using these technologies.

I haven't come up with a good way to measure this. I'm not aware of anyone who has. Here's an interesting thought experiment to give you some perspective, though. When I first entered this industry, the World Wide Web didn't exist, email was not used, and smart phones were more than a decade away. *If those things were taken from you, what is the maximum amount you or your employer might be willing to pay to regain access to those technologies?* Really do the math – what are your wages? How much more productive are you with email, the Web, or a smart phone? Of course, our personal utility functions are all different, but I bet some of you will find it hard to come up with the upper bound. It won't be constrained by utility, it will be constrained by budget.

These are the gains that accrue to the economy and they definitely stifle inflation. The problem is that these benefits are not uniformly spread over the entire economy. And this is one of the explanations for the above chart. Technology and Moore's Law have sent the price of consumer electronics into a sharp decline, but they haven't helped the cost of surgery where there is a productivity paradox, and yet the unavoidable condition that it requires highly-skilled labor.

## OUTLOOK

My revised hypothesis is this:

1. CPI understates true inflation.
2. There have been powerful deflationary forces impacting the prices of goods and services that are not uniformly spread throughout the economy, such as:
    A. Technological advancements and innovation;
    B. Low interest rates have some neo-Fisherian effects, causing deflation or disinflation in goods and services that are capital intensive;
    C. Increased price-competitiveness due to transparency and information on the Internet;
    D. Globalization
3. Monetary policy and government spending have been wildly *inflationary*, but this has been mitigated by #2 above, only in those categories of goods and services where there is an offsetting deflationary impact.
4. Policy makers have only been restrained by the blended and aggregate inflation levels as reported in CPI and PCE, and seem content to maintain very accommodative stances. What appear to be outliers (e.g. health care services and education), are really just better indications of how inflationary the policies are.
5. The same is true for asset prices like housing, gold, equities, bitcoin, et alia. There is no offsetting deflation derived from innovation.
6. **We are at a major inflection point with Artificial Intelligence. It will be profoundly effective at boosting productivity and thus deflationary. The bigger the deflationary impact, the more cover for policy makers to be even more accommodative, in turn driving higher prices in areas less affected or unaffected by AI, and driving asset prices higher.**

Another way of saying this is that we are both experiencing rampant inflation AND deflation at the same time. The aggregate analysis (CPI) belies the problem, but the tried and true test of looking at the price of gold is an easy way to see through the noise and to understand the monetary and fiscal impact on their own.

I don't think Milton Friedman's analysis is invalidated – inflation *is* a monetary phenomenon, and we are living in it. The deflationary forces of innovation which we are experiencing now would have been impossible for him to have imagined over 50 years ago. Heck, it would have been impossible for us to have imagined 5 years ago.

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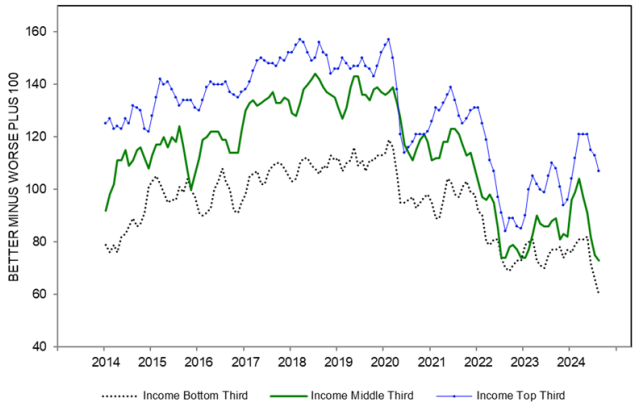
Inflation itself doesn't impact individuals in a uniform manner either. And the divergence I've noted above only exacerbates the issue. I'm guessing that most of you who are reading this are fortunate enough to be in a position that while inflation is surely a tax on savings and is certainly an annoyance as a consumer, it hasn't disrupted your life. Your grocery bill has gone up, but so has your portfolio and hopefully your earnings.

That hasn't been the case for less fortunate Americans. Wages have been slow to keep up. While Wall Street, market pundits, and policy makers celebrate a decrease in CPI, the average citizen isn't concerned at all about the second derivative. It's the price level that matters and that's still compounding at an unacceptable rate.

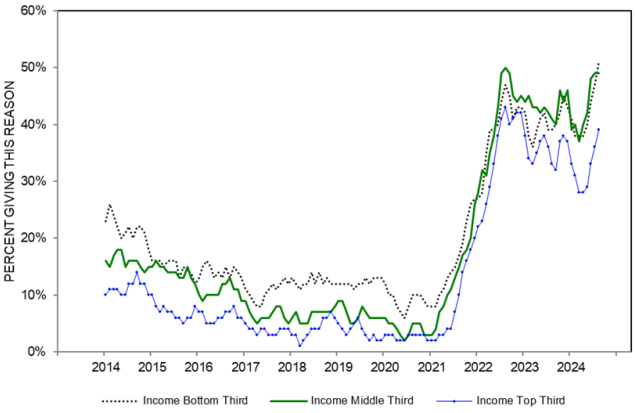
It's a tale of two cities. Just like there is both inflation and deflation at the same time, there seems to be a recession and a growth economy at the same time. I think these charts speak for themselves. This data is all from the University of Michigan Survey.

CHART 6: CURRENT FINANCIAL SITUATION COMPARED WITH A YEAR AGO




People in the top third feel quite a bit better than they have over the last two years. Those in the bottom third have never felt worse. Why?

CHART 7A: HIGHER PRICES AS REASONS FOR WORSE PERSONAL FINANCES




Higher prices. I guess most of the country isn't focused on the rate of change. Despite all the victory laps from the current administration and the Fed on inflation, the bottom third appears almost hopeless, with a recent, material deceleration.

CHART 14: EXPECTED CHANGE IN REAL INCOME DURING THE NEXT YEAR

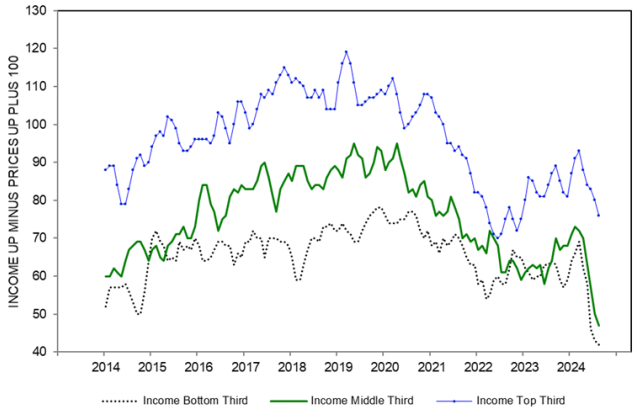
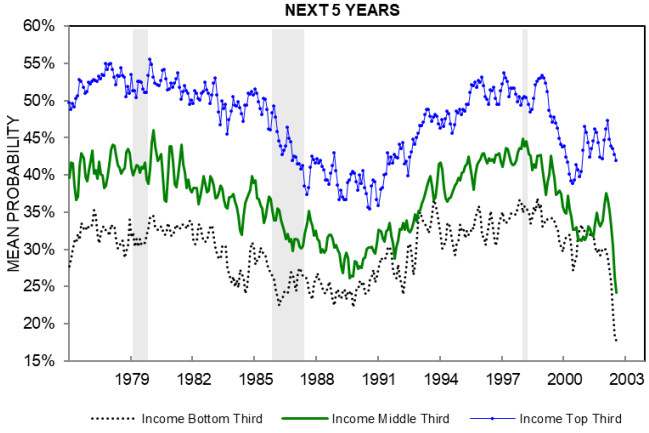
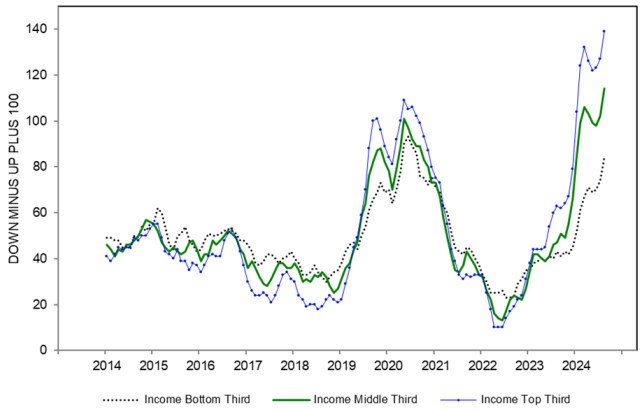


CHART 16: PROBABILITY OF REAL INCOME GAINS DURING THE NEXT 5 YEARS

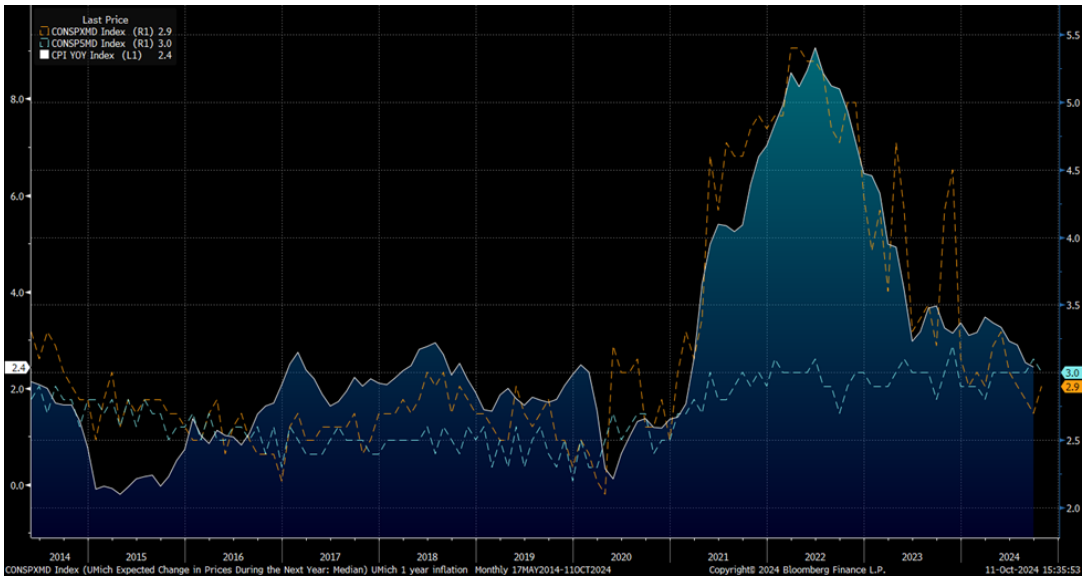



Again, these people didn't get the memo that inflation is under control and interest rates should be headed lower.

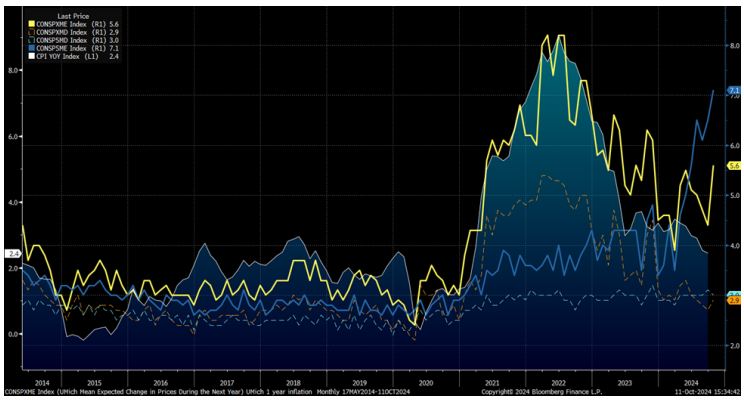
CHART 31: EXPECTED CHANGE IN INTEREST RATES DURING THE NEXT YEAR



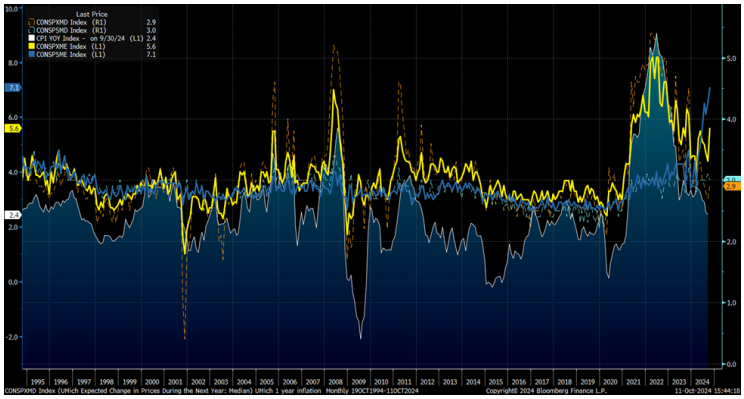

There's something else interesting in the University of Michigan data. They ask about expected change in prices for the next year and next five to ten years. Investors closely watch this data, but the headline statistic that gets all the attention is the *median* response. Here is the median response and CPI.



The median response doesn't tell the whole picture though. Since there's something like a zero-bound, the median answer won't reveal any movement to the upper band of the survey. Interestingly, the mean does quite clearly.




To be clear, this survey, which has been around for decades, says that when asked how much prices will change 5 to 10 years from now, the average response is 7.1%! This has been a very stable data point. Here's the 30-year view.




I don't know if there's any predictive value to these data. It's unlikely. But it's very telling of what the average consumer thinks about the future.

What's interesting is that the Federal Reserve felt compelled to make an aggressive, 50 basis-point cut to the Fed Funds rate recently. I can't say that I agree with the decision. But maybe they see something we don't. Perhaps labor markets are weakening faster than we realize. Are they anticipating frictional (or structural) unemployment from AI? Is this a sign of the fiscal dominance we posited earlier this year? I don't have any of those answers. But I worry that if I'm even partially right on my underestimation of inflation theory that *real* short-term interest rates might be zero or negative again.

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Last quarter I mentioned my concerns about the upcoming Presidential election. As we move closer to the Election Day, my concerns have only grown. From a policy standpoint, there are massive differences between a potential Harris administration versus a Trump one. We are feverishly preparing contingency plans for the portfolios based on the outcome. On top of that, it seems quite plausible that we won't know the result of the election right away. I won't belabor the point, but suffice it to say that there is great uncertainty in front of us.

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It shocks me how few of my friends and acquaintances use generative AI, and how nearly all of them aren't even casually familiar with recent AI developments. It's largely true in this industry as well. In case you're not paying attention, let me tell you, AI is rapidly changing the world as we know it. Of all the people I've asked about AI, they all fall into one of two groups: those that haven't really used it and those that think their own job is at risk. There's not much in between.

## OUTLOOK

In a recent interview, Mark Zuckerberg said,

> *With past AI architectures, you could feed an AI system a certain amount of data and use a certain amount of compute, but eventually it hit a plateau. One of the interesting things about these new transformer-based architectures over the last 5 to 10 years, is that* ***we haven't found the end yet****. . .There's just an interesting question of how far that goes. It's totally possible that at some point we hit a limit, and just like previous systems there's an asymptote, and it doesn't keep on growing****. But it's also possible that, that limit is not going to happen any time soon, and that we're going to be able to keep on building more clusters and generating more synthetic data to train systems, and that they're going to keep on getting more and more useful for people for quite a while to come.***

Keep in mind that when he says they don't know how far it goes yet, that they've taken it pretty far already by spending billions upon billions of dollars at this. Interestingly, last quarter they said, "We don't expect our Gen AI products to be a meaningful driver of revenue in 2024." I think it's safe to say we are still in the first inning for generative AI – the spending and investment is happening at an unprecedented pace, but, in my opinion, we've only scratched the surface on what it can actually do.

If you're not actively using a LLM tool like ChatGPT or Claude, I highly encourage it. OpenAI's recent release of the o1-mini and o1-preview models feels like quite a leap forward. The improvements in AI video generation have been staggering. Have a look at these videos on X (formerly known as Twitter) if you haven't already. The disruption to Hollywood, advertising, essentially all video content as we know it is right around the corner.

We are just starting to hear company management teams talk about results where AI adoption is having a material impact to their businesses. Walmart mentioned that it saved them "100 times the current headcount to complete in the same amount of time" on one project. Electronic Arts spent a great deal of time talking about the many ways AI impacts and changes their business – efficiency on development, speed to market, believability of in-game characters, and transformative game play.

By now you have probably seen the news that Microsoft has contracted to fund re-commissioning a nuclear reactor at Three Mile Island and buying all the electricity it generates. AI providers' and hyperscalers' ability to expand AI computing capacity is constrained by access to electricity. As John Keller, one of our portfolio managers, put it, "The fastest moving companies in the world are colliding with the slowest (utilities)." As a result, the second order and third order effects of AI are creating investment opportunities even in Industrials and Utilities, and also across every other economic sector.

I still don't know where we are in the economic cycle. This is not your grandfather's economy. Things are changing fast everywhere. To get by or to get ahead, you'll need to be ready to change your mind just as quickly – and this is not a skill that most people nurture.