



Investment Management Group®

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



## FOURTH QUARTER 2024 MARKET OUTLOOK

### MARKET OVERVIEW <sup>1</sup>

Reflecting back on 2024, it seemed as if each quarter had a year's worth of action in it, in terms of newsworthy events, economic change, political change, and shifts in market sentiment. With all eyes on the election and the wide array of potential outcomes, markets were relieved at the decisive result. Removing the overhang of uncertainty contributed to a sharp rally in risk assets. Investors quickly began trying to price in potential policy moves.

The S&P 500® Index posted a 2.41% gain for the quarter, in the face of a sharp move higher in long term interest rates. The 10-year treasury yield jumped by almost 79 basis points, even while the Federal Reserve made two more 25 basis point cuts to the Fed Funds rate. Bitcoin and other cryptocurrencies rallied post-election as well.

Economic data was generally good, including fairly stable employment numbers. Inflation metrics were stubborn though - this summer's enthusiasm over improving CPI numbers stalled toward the end of the year. There is a new sense of optimism, though uncertainty around the changing administration remains.

### OUTLOOK

A few quarters ago, I wrote a little about the Gell-Mann Amnesia Effect. This is the phenomenon that describes the situation where one can read a news article about a subject in which the reader has a great deal of expertise, and the reader finds the article to be full of errors and inaccuracies (the journalist might be well-intentioned, but doesn't have the expertise to realize the mistakes). But then when the reader sees the next article, one about which he does not have specific expertise, the reader believes that the article is entirely accurate. We fail to read them *all* with a sense of skepticism.

Whenever young people ask me for advice, I strongly encourage them to at least take a few courses in economics. Oftentimes, when young people don't ask me for advice, I will also encourage them to take a few courses in economics. I don't know if the world needs more economists, but I do know that a proper economics education can provide you a toolkit to understand and analyze some complex, counter-intuitive, and non-obvious issues.

If you never studied economics, or if it's been a while, allow me to refresh you on *elasticities*. Elasticity measures the sensitivity or change in demand or supply, given a change in price. Things that have very elastic demand will have large fluctuations in the amount demanded when prices change. For example, high-end luxury handbags have a relatively elastic demand profile – if the price drops, people will buy a lot more; and if the price goes up, they will defer or seek out other brands. Alternatively, insulin has very inelastic demand – if you need it, a rise in price might be very frustrating, but it almost certainly won't stop you from buying it; and a discount is great, but you won't need to buy more.

There are many factors that go into elasticity of demand, but mainly it's about how essential that product or good is, and whether or not there are substitutes or competing alternatives. To really have a sense of what happens to a good's price (and quantity) after a change in the market, elasticity of supply matters too.

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## OUTLOOK

When reading news articles about tariffs, please don't fall into the Gell-Mann Amnesia Effect! Much ink has been spilled on the notion that Trump's plan for tariffs will be inflationary, and nearly every one of these articles I've seen has been wrong. Consider the following:

- Tariffs are effectively corporate taxes. (And the people arguing that tariffs might spur inflation would never argue that higher corporate taxes would do the same.)
- Tariffs will undoubtedly have an impact on exchange rates, and those will likely offset some of the burden of the tariff itself (to the consumer).
- Revenue generated from tariffs could help reduce the deficit, and that might actually help reduce potential inflation.
- Economists study tax incidence – which is the way in which the burden of taxes are split between buyers and sellers. The tax is almost never simply passed through to consumers alone.
- Generally speaking, the result is determined by the relative elasticities of supply and demand. If demand is more inelastic, then consumers carry more of the burden. If demand is relatively elastic, the producers suffer more of the tax burden.

And most importantly...

- The change in prices of some goods relative to other goods is **NOT** inflation. Inflation is a deterioration of the purchasing power of the currency, and in my opinion is strictly a result of monetary and fiscal policy, namely too much money and/or too much debt.

I'm not saying tariffs won't have *some* impact, I'm just saying it's not inflation, per se. If we put a 10% tariff on goods from China, only some portion of that 10% will be passed on as higher prices (based on relative elasticities). If the prices of those goods affected by the tariff go up by 5%, for the consumers still buying those goods, they'll have incrementally less money to spend on other things. There's only so much money! Less demand for those other things, means that the price of those things would theoretically go down. Inflation only happens when there is more money to go around.

In short, I think the concerns over tariffs with respect to inflation are overblown. First off, we don't even know exactly what the proposed policies will be, and it's safe to assume they will change before they're implemented. More interestingly is that there will be changes in prices and quantities demanded of goods affected by the tariffs, and changes for goods that are substitutes. Some of those changes will benefit U.S.-based companies – that's the whole point! So, we aren't too worried about the *macro-related* impacts of tariff policies, but we are paying attention to companies that may be affected. (N.B. I realize this is a simplified analysis and that there are second order effects which I haven't addressed.)

Now, speaking of inflation, a lot has changed since the end of last quarter. The Fed had just given us a 50 basis point cut at the end of September, presumably based off of the perceived improvement with inflation. This last quarter, we got two more 25 basis point cuts from the Fed. It's important to note that the bond market doesn't seem to be on board just yet – the yield on the 10-year treasury has gone almost straight up since that first rate cut.

## OUTLOOK

It probably won't surprise you to know that I don't think we are out of the woods yet. I stand by the arguments I made last quarter on inflation:

- CPI understates true inflation.
- Deflationary forces aren't uniform.
- Policy has been very inflationary, but deflationary forces like innovation and globalization have masked or mitigated some of it.
- There is no deflationary offset for most assets, hence the performance of equities, real estate, gold, cryptocurrencies, etc.
- AI technology will be deflationary, but perversely might provide cover for even more accommodative and inflationary policy.

I was starting to think that there really was no way out of our inflationary problem. Today, there is some hope.

Politics aside, there are three very interesting *policy* aspects of President Trump's incoming administration. The first is DOGE (the Department Of Government Efficiency) which technically would just be an advisory commission. It's unclear just how much sway this effort will have, but there are some big names behind it, including some cross-partisan support. I think most of us would agree that the Federal government isn't known for being an efficient spender. For example, the Pentagon hasn't passed an audit since they started performing them. Compared to the public companies in which we invest, the government has far worse controls, accountability, and transparency. I have no doubt that there is some very low hanging fruit. It's human nature. Here's a wonderful quote from Milton Friedman:

*There are four ways in which you can spend money. You can spend your own money on yourself. When you do that, why then you really watch out what you're doing, and you try to get the most for your money. Then you can spend your own money on somebody else. For example, I buy a birthday present for someone. Well, then I'm not so careful about the content of the present, but I'm very careful about the cost. Then, I can spend somebody else's money on myself. And if I spend somebody else's money on myself, then I'm sure going to have a good lunch! Finally, I can spend somebody else's money on somebody else. And if I spend somebody else's money on somebody else, I'm not concerned about how much it is, and I'm not concerned about what I get. And that's government.*

I believe that the ultimate source of inflation is the government spending (other people's) money they don't have, racking up debt that they can only repay by creating more money. If there's a chance that government spending can be reined in, then there is reason for hope! The market appeared to be pricing some of this sentiment in post-election, but that seems a bit premature to me. Even if DOGE actually happens, and their recommendations are implemented, it will take quite some time to move the needle. There will be many other factors driving inflation between now and the time when we might potentially even begin to measure the impact of DOGE.

Another area for hope is in Healthcare. Healthcare spending represents a whopping 17.6% of GDP, and grew by 7.5% in 2023. Growth in Healthcare spending is expected to outpace GDP for the foreseeable future, meaning that its share of GDP will only grow. It would be hard to develop an exhaustive list of why this is happening; there are many reasons. One is that same problem that Milton Friedman identified – with insurance, you're spending someone else's money on yourself. The second is back to elasticities. The elasticity of demand for life-saving drugs is almost entirely *inelastic* – there's no price too high to save your loved one – which makes it far easier for pharma companies to charge very high prices.

## OUTLOOK

I understand that RFK Jr. might be a controversial figure, but I think everyone would agree that his agenda is disruptive. If he gets confirmed and is successful at “making America healthy again,” there could be profound economic implications. Healthcare spending is crowding out other, more productive forms of spending, and it represents a disproportionate share of Government spending (which leads to debt and inflation).

On top of that, there is some emerging evidence that some very inexpensive medicines might have legitimate therapeutic benefits that aren’t yet widely recognized. One of the structural problems with our Healthcare system is that there is almost no economic incentive to find cheap and effective treatments, certainly not for the companies involved in traditional treatment protocols. The research to explore and verify the potential of inexpensive (and off-patent) treatments falls into the realm of *public goods*. Private enterprises have no incentive to pay for this (and incumbent cancer drug producers have a very strong incentive to prevent this from happening). Public goods are exactly the kind of thing the government *should* be paying for.

I realize this line of thinking is speculative. I don’t know that RFK Jr. will be confirmed, or successful. I don’t know if clinical trials and testing will ever be done for these potential remedies, and if they are, I can’t know if they will validate the speculative hope. However, should they happen, these are needle-moving events. Developments like this could reverse the trajectory of ever-increasing healthcare costs, thereby reducing government spending and debt, and potentially shrinking insurance costs, allowing employers to pay higher wages. It’s rare to find these opportunities of this magnitude for improvement in the economic condition of developed economies. Maybe the odds are low, but the outcome would be large, and worth paying attention to.

The other big, needle-moving phenomenon is Artificial Intelligence. Before we go into the recent developments there, and since we’ve been spending time on Healthcare, let’s delve into the intersection of generative AI and Healthcare.

I think there are many avenues by which advancements in AI could transform medicine, including but not limited to drug discovery, research, clinical improvements, and operational efficiencies. It’s already proving its worth as a diagnostic tool.

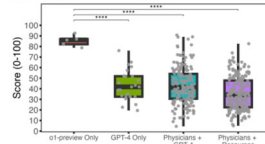
I have had some knee issues over the years, and I’ve learned quite a bit about the knee and hip and joint health in general, but I was stumped about a year ago when I had some debilitating pain. I had no idea what I had done to it or what the problem could be. I went to ChatGPT and told it the problem and prompted it to ask me questions, just like a doctor would in a clinical exam. It gave me a list of possible conditions: meniscus tear and a couple of other obvious choices, but then it had listed an “injury to the popliteal tendon.” I had never heard of that one before.

The pain was bad enough that I went to a doctor friend of mine. Upon the initial exam and X-ray, he thought it was just arthritis and loss of cartilage. I did have a bone fragment loose in there too. Surely it was one of those things.

Eventually I had an MRI, and my doctor was shocked while reading the result, “I almost never see this. It’s a very unusual thing. But you have a cyst on your popliteus.”

It turns out that my experience with AI’s diagnostic ability wasn’t a fluke. A recent [study](#) showed ChatGPT’s o1-preview model significantly outperforms doctors and even doctors assisted by AI in its diagnostic ability.

Figure 5: Comparison of o1-preview, GPT-4 and Physicians for Management and Diagnostic Reasoning  
A. Grey Matters Management Cases: o1-preview Management Reasoning Scores Compared to GPT-4 and Physicians



B. Landmark Diagnostic Cases: o1-preview Diagnostic Reasoning Scores Compared to GPT-4 and Physicians

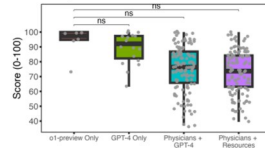
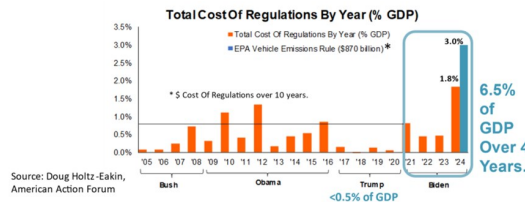


Figure 5: A. Box plot of normalized management reasoning points by LLMs and physicians. Five cases were included. We generated one o1-preview response for each case. The prior study collected five GPT-4 responses to each case, 176 responses from physicians with access to GPT-4, and 199 responses from physicians with access to conventional resources. \*, p < 0.05, \*\*, p < 0.01, \*\*\*, p < 0.001, \*\*\*\*, p < 0.0001. B. Box plot of normalized diagnostic reasoning points by model and physicians. Six diagnostic challenges were included. We generated one o1-preview response for each case. The prior study collected three GPT-4 responses to all cases, 25 responses from physicians with access to GPT-4, and 25 responses from physicians with access to conventional resources. Ns: not statistically significant.

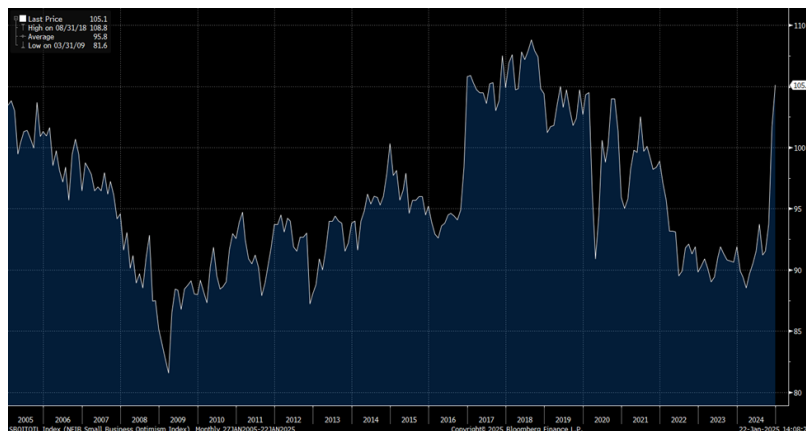
In a mature, developed economy, usually improvements are very incremental. This could be a leap. I realize that there will be regulatory hurdles, and pushback from the established industry, but capitalism and competition should eventually win the day. Better, cheaper healthcare won't solve the inflation problem alone (again, these are just relative price changes), but it does free up money that can be deployed in other, more productive ways. Additionally, given how much government spending is on healthcare, this might ultimately impact the debt and deficit in a positive way – and *that* could help inflation.

The third catalyst from the incoming Trump administration is the promise of a lower regulatory burden. The economics team at Piper Sandler, led by the phenomenal Nancy Lazar, published some data, trying to quantify just how impactful this issue could be. See below.



"Regulation is costly. .... Medium-sized firms experienced 47% more costs than small firms and 18% more than large firms to comply with regulations."  
The Regulatory Review (U of Penn) 2/24.

Many CEO's are giddy about the change. Look at the big uptick in small business optimism. The only other time we saw this big of a move was with Trump's win in 2016.



## OUTLOOK

And for even more reason to be optimistic, advancements in AI technology plowed ahead again this quarter. AGI and ASI (Artificial General Intelligence and Artificial Super Intelligence), which many people thought were either unattainable or years away, are rumored to be around the corner. AI's ability to assist in creative endeavors and even research is now coming to light. Improvements in image and video generation have had another step up – it has become very difficult to distinguish real from AI-generated images. Hollywood should be nervous.

These aren't the only examples, of course. With today's pace of innovation, there are many avenues which could lead us to a more efficient, more productive economy. We recognize these advancements as potential fuel for a better economy, contributing to reduce the inflation burdens we face. More importantly for us is that the mechanism through which these advancements impact the broad economy is through the growth and competition between individual companies in free markets. As we've said before, there will be winners and losers. Change is afoot.

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In closing, I'd like for you to consider something a bit more personal. I was telling my kids the other day about life before the Internet. There was no email; there were no search engines. We looked up phone numbers in the white or yellow pages. People relied on communicating through what we now call "snail mail." Most of you reading this will know what I mean. And then we spoke of the time before cell phones. I would keep some quarters on hand so I could use a pay phone to check in with my parents. Being out of touch was the norm. And then again on the time before smart phones.

In retrospect, it's clear to see these were irreversible inflection points in civilization. There was life before Internet/cell phone/smart phone, and there is life after. We still don't know all the long term ramifications. It will be the same with AI. We are all living through the transition. Today, it is reckoned that publicly available AI tools have the capability of PhD or even Nobel Laureate-level understanding of every subject. It used to be fairly easy to find a so-called hallucination from AI. Now you have to be a true expert in a subject to detect a mistake by AI. Having that level of expertise on all of humanity's knowledge at your fingertips, 24/7 is a shocking situation.

When I first learned to drive, I had a physical map in my car. If I was going somewhere new, I'd literally have to stop and study the map and plan my route. Eventually, I learned the city. It would be quite easy for me to draw a detailed map of Houston just from memory. My kids cannot do this. Apple Maps has spoiled them. **They don't get lost the way I did, but they also haven't learned.** Are they better off?

Struggling *is* learning. In the gym, you don't get stronger by lifting easy weights, you get stronger by pushing weights that cause you to struggle and nearly fail. The same is true with the mind. If you ever had a calculus class trying to figure out the integral of a function you haven't seen before, and then finally have a breakthrough and solve the problem, you know how rewarding that can be. *That* is learning.

I worry that AI technology will have a bifurcating effect on humanity. For some, it will be like Apple Maps – it can solve the problem for you, getting you from point A to point B, figuratively in this case, and bypassing the struggle *and* the learning. For a few, it won't be a crutch, it will be an educator or trainer – helping you find new ways to struggle... and learn. I believe it is a rare and disciplined person that will take full advantage of AI capabilities. I hope that society's capacity for critical thinking doesn't go the way of navigating in the car, but I fear it will. If it does, power will accrue to the few that commit to the journey, that embrace the struggle. Take the AI plunge, just harness it to be your educator, not your crutch.



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