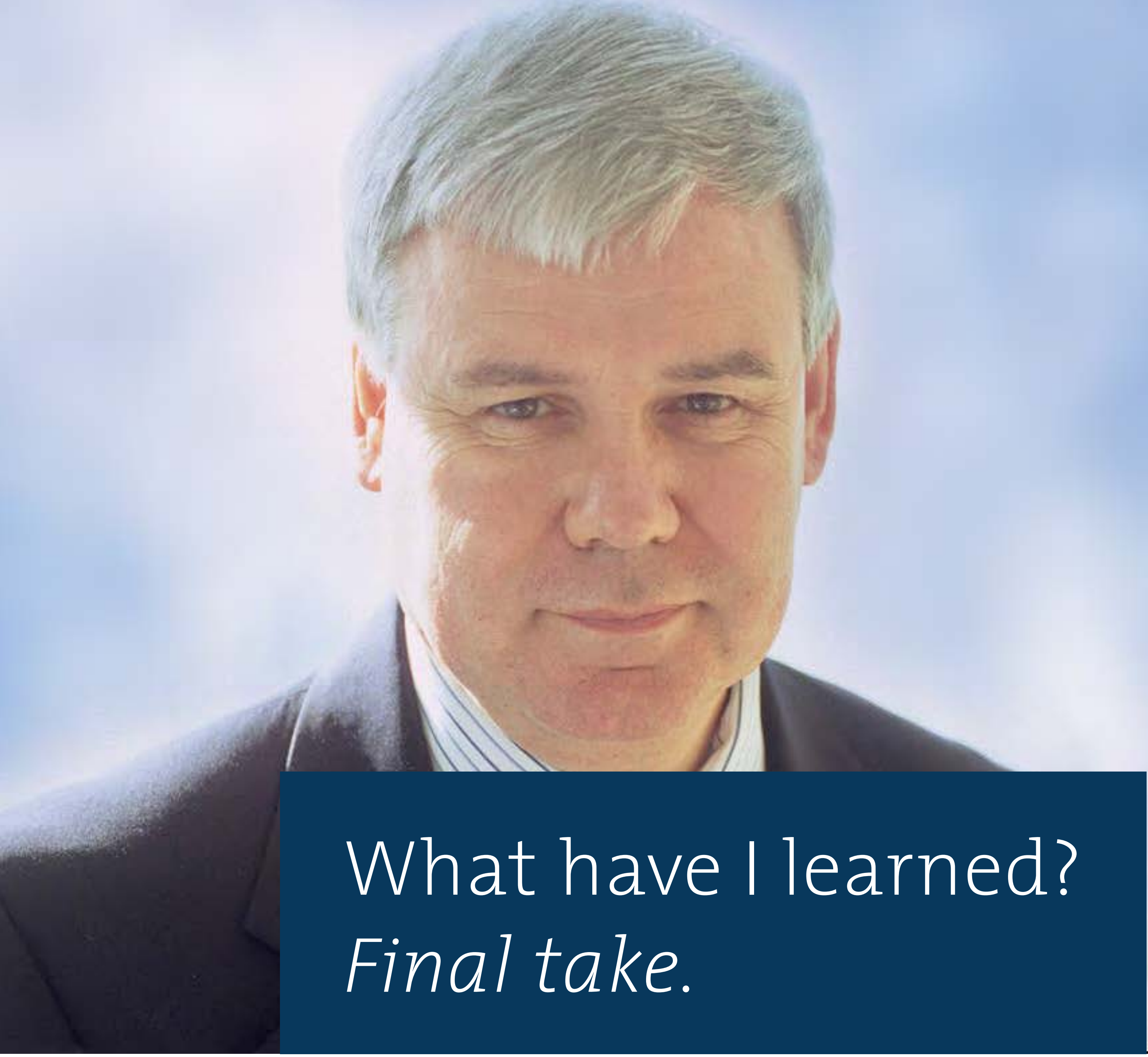

What have I learned?
Final take.

By Jan Loeys

What have I learned? Final take.

- This is my final note at JPMorgan, having decided now is a good time to retire after nearly 40 years in research at the firm. Alex Wise, who has written many issues of *The Long-term Strategist* with me over the past 4 years, takes over. You are in good hands with him.

- I have written twice before about lessons learned, one in 2017 at the end of my tactical strategy years, and one in 2023 about long-term investing. Here are some closing thoughts.

- As analysts and investors, we are constantly pouring over data for patterns and lessons on what to expect next, as if markets and economies are stationary systems. I find, though, that the only real constant is change as people, policy makers and investors constantly learn and adapt. It is dangerous to expect past patterns will persist or that macro variables and assets prices/IRRs will always return to past means.

- Each of us wants to believe we know better than the market, which is driven by the sum of all of us. Clearly this does not add up. I find it better to start the presumption that markets are quite good at pricing the future and then look for exceptions where a decent case can be made for a mispricing.

- The market reflects the "crowd". Is there wisdom in the crowd, as is frequently argued, or instead madness? I think most of the time, the crowd's wisdom dominates, but it is at extremes that madness takes over, in bubbles and panic. Keep an eye out for extremes in long-term value to tell you when wisdom is turning to madness.

- Being long term does give you advantages. Saving for old age is the main reason why we save and invest, and the long-term perspective should thus dominate asset pricing. But I find market attention, models, news, and data focus on the near term, making truly longer-term investors the minority and thus better able to pick up assets that are priced for the short-term investor, making them attractive for the long-term one.

- One principle I have been living by is to always keep things simple, in analysis, writing, speaking, and investing. Simple words, short, clear and blunt language, and simple and cheap products are best.

- Words, words, words: Long or short term; fundamental or technical; cycle or structure; regimes and paradigms are all words that aim to describe and explain reality, but they exist only in our mind. Do use them, but do not think of them as facts and reality.

- Thank you so much for your the support, friendship, and insights you gave me over the years. You taught me much more than I could ever teach you. It will stay with me forever.

You can access all of the research notes from this book on J.P. Morgan Markets. They are available on the Long-term Investment Strategy page here: **https://www.jpmm.com/#research.longterm_strategy**

As in the earlier such notes, these are my own thoughts and do not necessarily represent those of my fellow researchers nor an official view of J.P. MorganChase. To make this clear, I will use the term "I" here instead of our usual communal "We".

1. All knowledge is provisional.

- As well understood in science, what we call knowledge in any field is really the latest set of **hypotheses** for which we have so far received the best empirical support and that allow us best to understand what is happening around us and to make some educated guesses – aka forecasts – of what to expect in the future. I am tempted to say that **there is no absolute truth** and never will be, but need to make clear I am only talking about economics and finance, and not about what is morally right or wrong.

- **Learn, and unlearn**. I always thought that learning is *accumulative* in that each lesson would add to my understanding of the world. I hoped to become more knowledgeable as I studied, analyzed, and acquired more insights. But instead, I found that for each new insight I gained, I learned that one or more old ones are no longer the case or may never have been fully right. In the end, I am not sure I now know more than when I began, unless I count also all the things I now know are not so. If the beginning of all wisdom is to know what you don't know, then I have surely gained a lot of wisdom.

- One implication of this has been that I have generally preferred working with economists and finance specialists with **more advanced academic degrees, and/or with more experience**, not because they know more, but exactly because they have learned how little we can actually say with confidence.

- **What do we learn from**, and what is more important, theory or empirical observations? Do we learn deductively from principles, or inductively from observations? To me, data without a theoretical framework mean nothing and easily give you nonsense correlations. But theory by itself is not enough, and if anything, worse, as for every theory on how an event drives markets up, one can frequently build another one with the opposite result. **The supply of plausible theories in economics and finance is quite elastic and a lot more inexhaustible than the supply of empirical regularities.** Hence, we need both theory to guide us where to look for empirical relationships, and data to test what theories can get empirical support. **I tend to read pretty much only empirical research** in Economics and Finance.

- **The Wisdom or Madness of the Crowd?** Which one is it? The wisdom of the crowds refers to groups of independent thinkers generally yielding better judgments or forecasts than a single person. Philip Tetlock and Dan Gardners's 2016 book on Superforecasting: The art and science of prediction was a big eye-opener for me on this. That is why I have paid a lot of attention to the consensus view on markets and economies that so many a strategist tends to pooh-pooh as just so "average" and not very good. As I argued in my first Lessons note in 2017, I pay particular attention to the momentum in consensus opinion *changes* as their serial correlation give them great signaling value for markets.

- But what is the Madness of Crowds then? It is what happens when the crowd's wisdom goes in hyperdrive and leads to manias and bubbles on the upside and panics and crashes on the downside. The main protection against wisdom turning to madness is to keep your eye on very large deviations from long-term value to signal that the momentum of the crowd has gone too far, and it is time to go against it.

2. Change is the only constant.

- With this, I don't just mean that there is always volatility in markets and economies, but more deeply that their underlying structures are subject to constant change, most of the time slowly, but at times suddenly. We analysts typically assume, at least implicitly, that what we try to forecast is the result of a **stationary processes**, which means that its statistical properties – mean, variance, and correlations – do not change over time. The more history we thus have, the better we should get at forecasting.

- In tactical investing, we use this assumption most to judge whether particular asset classes are cheap or expensive, based on where their internal rates of return (IRRs) are trading versus past means. But **if we cannot be confident that IRRs will indeed mean revert,** then we are always wondering whether any deviation from a past mean could just be a move to a new mean. The steady decline in real US bonds yields from the 1980s to the eve of Covid, as well as the secular decline since the

Middle Ages[1], show us the dangers of assuming stationarity and mean reversion.

- I have thus learned it is better to look at our world as a system that forever changes and is thus not stationary because **people constantly learn and adapt.** Tomorrow, our behavior can be different from today, because tomorrow, we have one data point more, namely what happened today. That was the idea behind the so-called Lucas Critique on which I wrote my dissertation nearly 50 years ago.

- Forecasting how people, markets and systems are adapting and learning is **extremely difficult**, and I have made mistakes in believing I had detected such regime changes and why there were occurring, for it to dawn on me later there was no real change, or that it was quite different from what I had expected. I thought, e.g., a few years ago that the world would gradually turn away from strict inflation control as DM growth had been steadily falling over the last three decades of inflation targeting, despite the reasonable expectation that macro stability would boost growth. The Great Moderation had not only reduced macro volatility but coincided also with weaker growth. Wide US voter anger because of Covid inflation, partly induced by massive fiscal easing, then showed me that voters care more about low inflation than low unemployment. I had to eat humble pie on my earlier view.

- For one to have a decent chance of seeing the right change, it must have started, but not yet be fully established because at that point it will be obvious to all and fully priced in.

3. Market efficiency should be your starting hypothesis.

- **Eugene Fama's 1976 Foundations of Finance** was the first Finance book I read just as I arrived at UCLA. It had a big impact on me. Fama has long been the best-known champion of the **Efficient Markets Hypothesis**, according to which all known information should be in the price. And he received the Nobel Prize in Economics for it in 2013.

- It was thus obviously a challenge becoming one of the first strategists at the bank as I could not simply say "markets are efficient and there is nothing for you to do". But it always required me to think about what conditions could lead to mispricings of assets. These conditions include anything that prevents full arbitrage such as market segmentation, coming from differential taxation, regulations, accounting rules, capital requirements, capital controls, investment horizons, or from price insensitive investors such as central banks.

- Still, one should **never underestimate the market** and should give it due respect as it is quite fast at incorporating new information. The speed and ubiquity of new information, new data sources and academic research on markets imply that new insights on how to beat the market, with tactical or systematic alpha, get priced in quite rapidly.

- A rather uncomfortable implication of the constant search for superior returns to risk is that **any opportunity that is quantifiable and thus easily discoverable with today's quant tools, is bound not to last very long**. This goes against the direction of our industry towards ever more sophisticated quantitative techniques applied to an ever-expanding collection of data, culminating now in rapid application of AI techniques to find hitherto hidden profit opportunities. All this **steadily shortens the life span of systematic alpha, and requires us to constantly invest in better and faster techniques and finding new data sources.** Most alpha thus has a sell-by date.

- On the upside, this leaves one with tactical and strategic opportunities that cannot be detected through quantitative analysis of past data. That is why in recent years I have been directing my focus more towards **longer-term regime changes** as their slow-moving nature make them more likely not yet to be fully incorporated in asset prices, and their long-term nature means they are more likely not observed seen in the past and their impact on asset prices thus not easily detected and arbitraged away with quantitative techniques. These more structural changes included our work on changing longevity, birth rates, and immigration on the demographic side, climate change and extreme weather, deglobalization, populism, and the new US-China competition[2].

- **Thematic investing** is one way that many investors aim to position on a view on how the world is changing. When we looked at such funds,

[1] See Rogoff, Rossi and Schmelzing, Long-run trends in long-maturity real rates:1311-2022, American Economic review, Aug 2024.

[2] The *JPMorgan Perspectives* series led by Joyce Chang, Chair of Global Research, has since 2017 covered and analyzed more extensively many of the paradigm shifts and regime changes that we as long-term strategists have been considering.

though, we found they badly underperformed the overall market. Half of this was due to the high fees on such funds. The other half was that investors only really tend to buy such funds on evidence that they are indeed outperforming, which means that by the time they bought them, the assets the funds held were rather expensive and set to produce lower returns from that point on. The lesson here is investing on a widely held view that already has had a measurable impact on asset prices probably means you will be a bit late to the game. Better to start on a theme that is not yet consensus and can only be judged a serious risk rather than a done deal.

4. We are all long-term, until…

- **...we lose money,** paraphrasing Mike Tyson's "Everybody has a plan until they get punched in the mouth". Pretty much every asset manager and non-financial company will say they are long term as that sounds very fundamental and intelligent and signals they not just riding the latest fad. Short-termism is considered a negative. But are they really? Virtually all research from sell-side firms like ours is tactical. Many an investor with far-out liabilities or spending needs -- like pensions, endowments, and sovereign wealth funds -- swear they are long term, but quietly admit that even one year of weak performance will elicit calls of concern by their boards that will demand changes in management if the bad performance lasts for 2 or 3 years.
- **It is easy to be critical** of panicky reactions to market downfalls, and of cutting risk when the near-term outlook looks dicey. Leveraged investors do not always have a choice as they may be broke before their more optimistic long-term views become reality. But even for long-only investors with no immediate liquidity needs, it is not irrational to cut risk when markets fall as past histories that falls in assets prices have been good buying opportunities for the patient investor are no guarantee that history will repeat itself. As argued earlier, change is the only constant.
- **Long-term investors do have some advantages, though.** In principle, being a different kind of investor than most should allow you to pick up assets that are attractive from your point of view as the overall market will be determined and priced for the risk and return perceptions of the majority. With the main reason for saving and investing for most people and the people who manage their assets having enough money for old age, the long-term investor should be the dominant force driving asset prices. Still, I find that news flow, market attention, flows, investment research and models are so dominantly short-term oriented that having a long-term perspective and investment horizon puts one more in the minority and thus better positioned to pick up attractive assets that are really priced for the shorter-term investor.
- **One way the long-term advantage manifests itself is its perception of risk.** Since Harry Markowitz invented Modern Portfolio Theory, our industry has defined investment decision making in terms of just three parameters: **expected return, risk,** and **correlation,** or **μ, σ,** and **ρ**. Risk is generally estimated as the standard deviation of historic returns. To judge long-term risk, our industry assumes returns are identically and independently distributed ("iid") over time. This allows us to gauge risk over longer periods through the square root of time rule as the volatility (σ) of the average return over n periods is then $\sqrt{n}*\sigma$. If asset returns mean revert over time, and some do, then risk over longer periods will be lower than this $\sqrt{}$time rule.

  More importantly, we should think about risk more as the probability and magnitude of being wrong in our return expectation. We have found we can use asset class IRRs to make pretty accurate projections of future long-term returns. These IRR-based return forecast errors is to us the right measure of risk for the buy-and-hold investor. We have found this measure of return uncertainty to be less than half of what is implied by the $\sqrt{}$time rule on short-term market volatility. That is why we have argued that long-term risk is much less than implied by the extrapolation of short-term volatility. It is this finding that allows us to understand why it makes sense for the long-term investor to hold more risky assets than investors more pre-occupied with the near term.

5. The beauty and efficiency of keeping it simple.

- **I live by KISS (keeping it simple) in communication, analysis and investing**.
- In **speaking and writing**, I started expressing myself with few and simple words, as English was not my first language. Over time, I found it helped making myself better understood. Starting in the US helped as Americans use shorter sentences and abbreviate everything. I found that a simple trick to be clear and well understood is to stick with the Anglo-Saxon core of the language, rather than

French and Latin words which tends to be more abstract and cerebral. Put even more simply: stick with "peasant-English". Instead of saying, e.g., that "the process of monetary contraction is set to accelerate", just say "The Fed will hike rates".

- KISS analysis is equivalent to **Occam's Razor**. If you can explain the world with one variable, don't use two. This does not deny that reality is complex, but it forces one to focus on the most important drivers of markets and to cut the clutter.
- KISS **investing** means using a simple approach to choose an investing portfolio, starting with basic and clear objectives, holding just a few basic, globally diversified funds – such as an equity and a bond fund – that are easy to value and to judge risk and long-term return on, that are cheap to hold and easy to liquidate, while staying fully invested in them without a lot of trading around them. MIT's Andrew Lo, in his recent In pursuit of the Perfect Portfolio, with Stephen Foerster, interviews 10 of the greatest thinkers in finance (6 with a Noble Prize) and pretty much each of them points to holding a few simple, passive, long-term global investments as their perfect portfolio.

6. Everybody has an axe.

- Before I start writing on an asset class or strategy, I try to review the literature, as there is no sense in trying to reinvent the wheel. And I always thought such research is objective because "it should be". But over time, I have become a bit more jaundiced on this. I now always ask myself why the authors have written this piece, and where their loyalties are. Financial researchers are not academic professors who are supposed to discover the absolute truth but belong to private organizations that have been tasked them to help them make money. This applies to me also. And academic researchers also frequently consult with industry or try to stay true to earlier positions they have taken on. That is, we all try to sell you something. Caveat emptor.
- **How can one then find more objective analysis?** One approach is to focus on analysts who have been studying the same field for a long time, as research is a "repeat purpose" business, and not just a single transaction. Analysts who are too much into "sell-mode" will not gather a loyal following and may thus not last very long. A second is to read analysts who do turn negative on their asset class from time to time. And a third is to read opposing views on a topic or asset class and make up your own mind on their relative merit.

7. Words, words, words.

- Short or long term; fundamental or technical; supply or demand side; cheap or expensive; cyclical, structural, or secular; paradigms and regimes. These are all words that we bander around in an effort to create some clarity in a messy world. But these words are just that: words and not reality. The here and now are the only reality. The past is gone and forever subject to re-interpretation.
- Is the long term just a sequence of short terms and we should analyze each of them as they come? Or is the short run just the first in a path to the long run and we should really focus on the latter to understand where the future sequence of short runs is headed? Our Chief Economist Bruce Kasman's approach is more the first. Mine more the second. My recent work has focused on the long term not because I know for sure that this is the only way to understand the near term, but more to look for signals, and forces that can impact on the here and now to complement that many shorter-term forces that keep our attention each day.
- How, e.g., do we really know that we are today at the beginning of a new paradigm in international relations rather than being in a skirmish in a forever changing world? Regimes and paradigms tend to be defined, timed, and understood mostly after the fact. How do we know that a given market move is fundamental or technical? The latter seems to be just a word for not knowing what caused the move.
- I do not deny the value of these big words and have been using them quite a lot myself, but each time I need to remind myself that these exist only in our mind and are just names we give to describe how we see this messy world.