Where Macro and Fundamental Analysis Meet

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STEPHANIE NOTOWICH: Hi, my name is Stephanie Notowich. I'm a member of the Client Service team here at Dodge & Cox in San Francisco. 2022 has presented a broad set of challenges for the Capital Markets. In the United States, the Federal Reserve has aggressively tightened monetary policy in response to inflation levels not seen in decades. More recently, central banks in Europe and the United Kingdom have followed suit. We've also seen persistent geopolitical challenges. The COVID-19 pandemic and Russia's invasion of Ukraine are two such examples.

I recently sat down with Jose Ursua and Mimi Yang, members of our Macro team at Dodge & Cox. We discussed macro themes broadly, and we also explored where macro analysis fits in our bottom-up research process. Before we begin, let's pause for a moment and take a look at our standard disclosure courtesy of our Legal team.

Now, let's begin. Jose and Mimi, welcome and thank you for joining me.

JOSE URSUA: Hi, Stephanie. A pleasure to be here.

MIMI YANG: Thank you, Stephanie. It's great to be here as well.

STEPHANIE NOTOWICH: Thank you both. We're hoping to talk about these issues and where the analysis of macro factors fits in our bottom-up research process. Lately, macro concerns have dominated the headlines. Perhaps we can take a step back and explain why macro analysis is important to our investment approach, and how we incorporate it within our investment process.

JOSE URSUA: You know, if you humor me with an analogy that I thought about as you were just asking that question, it's a little bit like asking an Italian chef why they think that tomato sauce is important in the dishes they prepare. As a macroeconomist, I tend to believe that the macro input is particularly useful and important, but I'll highlight two ways in which that's the case.

The first one is because macro can be a very important driver of asset returns, and this happens in two states of the world. The first is normal times. When things are in the course of regular business, there are macro policy developments. There are growth trajectories. There are policy changes. There are fluctuations in the internationally determined prices, like energy prices and so on. This can have an impact on the way that securities evolve and are priced in the markets. The second time, or state of the world, is that of crisis, or very volatile times, like we've been through over the past couple of years. You can have a pandemic, for example. You can have a stock market crash, for example. Or you could have an erupting war in response to some explosion of geopolitical risks. In both of these instances, macro can have a useful guiding hand when it comes to making investment decisions, even in a traditionally bottom-up oriented firm like we are, and, in particular, because the approach that you asked about is very much in line with the way that we've done bottom-up research for decades.

If you will, we're doing bottom-up macro research in the sense that first, it's very rigorous. It's very detail oriented. It's painstaking attempts at identifying the drivers, the data points, the factors that can lead to such and such outcome. The second way in which it's analogous is because it's very aligned with our valuation focus. A lot of our efforts on the macro side relate to fair value of different securities, or even states of the world, or even macro variables that we're looking at. The third one in which it is analogous is because we're very long-run focused, as well. Everything that we do, both in the bottom-up research side and on the macro side, has to do with this longer-term, multi-year perspective. Perhaps the fourth and fifth would be it's a flexible input. You know, sometimes the macro takes a front driver's seat and we recognize that. Sometimes it does not, and so we take a step back. And we just allow for this input to have a contribution, but definitely not a determining role. This leads me to perhaps a fifth point, which is that we tend to do this in line with our probabilistic view of the world and building up scenarios, which we do and have been doing for decades.

STEPHANIE NOTOWICH: Interesting. As you look at this wide range of possible outcomes for the direction of the economy or rates, what is really the canary in the coal mine? What is it that you're looking for in your research specifically?

JOSE URSUA: Well, this reminds me of a quote from [Pierre-Simon] Laplace, a French polymath, who lived about a hundred, two hundred years ago, which is: "Probability is nothing but common sense reduced to calculations." In a way, you know, when we try to look at the world this way, there is uncertainty at the global level, right, in terms of all sorts of things that happen all at the same time. That translates into uncertainties around economic outcomes, which ultimately translates into uncertainties about the market outcomes. This is what we ultimately care about because we're investing our clients' money. When you translate all of this, the way that we look at it is we need to sketch out distributions of possible outcomes, meaning we need to define what are the outcomes that are possible. Then we assign to these outcomes a probability and come up with at least three states of the world—a baseline, which captures most of the bulk of the probability mass, and then two alternative states of the world. This is important for us because there is uncertainty with respect to the way that the distributions perceive the outcomes and the probabilities, but also with respect to the distributions themselves. This is what

in technical terms is called ambiguity around the uncertainty of distributions. So, we're very open-minded. We're very open-minded with respect to what we think the outlook or the future may look like. We're also very open-minded when it comes to receiving the different input from different backgrounds of our colleagues who are going to try to answer these big, broad questions that we put to ourselves as a team. We do this very openly. We try to bring in as much brain power as we can to thinking about what can the world look like, what probabilities would we assign to this, and then provide the best input for Investment Committees to make investment decisions.

STEPHANIE NOTOWICH: Mimi, can you explain how the Macro team is structured and how the Fixed Income and Equity Analysts integrate their research?

MIMI YANG: Sure, I'd be happy to speak to that. I wish I had a clever analogy like Jose did, but without that I'll just jump right into it. The Macro Analysts on the team cover a wide range of developed and emerging market countries that are part of our investment universe. In addition to being responsible for in-depth country analysis, we also work very closely together to analyze and think about the impact of important investment themes, such as some of the ones you discussed earlier, Stephanie, that could impact a wide range of geographies and market factors. The integrated research process that you alluded to is very much part of the Macro team's research process as well, and we think this is important because it allows for a diversity in perspectives. By working closely with our colleagues on the Equity and Fixed Income Research teams, we find that there are often positive feedback loops that are generated between the Macro team's work and the bottom-up views of our industry analysts.

Perhaps here it would be helpful to provide some examples of this collaboration, and one that comes to mind is an internal working group we have that focuses on China-Taiwan risks. This group consists of members from the Macro team, such as Jose and myself, with expertise on Taiwan and China, and it also includes members from our Equity team with in-depth knowledge of the Chinese market. By working together, we think this creates a better opportunity for us to evaluate a potential range of outcomes, and it allows us to also better understand the implications this will have for global markets in different sectors and companies.

I think another example that would be helpful to highlight is the work that we have done in terms of longer-run inflation prospects. This is obviously an important theme in the markets right now. We looked at both the Macro team's view on inflation, which really comes out of our assessment of the economic outlook of monetary and fiscal policy [and] of supply and demand dynamics, and combined that with a bottom-up inflation expectations of our industry analysts for their respective industry. By looking at both of these perspectives, it gave us a better understanding of the broader range of outcomes, and we considered both as we thought about how to think about inflation longer term.

STEPHANIE NOTOWICH: How do the Investment Committees incorporate all of this analysis into managing our strategies and evaluating individual securities? Could both of you comment on that?

JOSE URSUA: Sure. I think the key word here is "integrated." Our research is really integrated across the type of fluid dialogue that we have with our colleagues on both the equity side and the fixed income side. More broadly, you know, [the] Client Facing team brings us very useful questions for us to try to tackle, or answer questions from clients themselves. Because I'm an economist, I'm going to try to describe this as a supply and demand type of dynamic. On the supply side, the macro effort or the Macro team attempts to put forward ideas that may be useful for the investment decision-making process. Some of those ideas end up being specific advocacies. Some of those ideas end up just as inputs into that decision-making. For example, we, a few years back, became bearish on the Chinese renminbi, and so we put forward an advocacy to hedge some of our China-related exposures on the equity side. Also a few years back, we became more interested in the fixed income proposition of several emerging markets, and so we proposed that we should increase some of our exposures in these areas. We think that that was a useful way to contribute to the investment decision-making process from the supply side.

There's also the demand side of this question, and the demand pertains to the types of questions that we get asked by our colleagues in either Investment Committees or [Global] Industry Analysts, both from the equity side or on the fixed income side. To give you an example, our colleagues who cover financial institutions in the emerging markets world recently approached us with the question of how we see the ongoing electoral process in Brazil. We put together our heads, and we put together our brains, to try to come up with a set of possible outcomes and the distribution of probabilities that we would assign to those. To wrap it up, I think there's a bottom-up level of which these contributions happen, which are at the company, very security specific decision-making level, but also at the portfolio basis. You know, the macro is particularly useful at assessing from a, let's say, forced perspective correlations/diversifications arguments, beta arguments, and sources of risk and rewards that we often focus on. What would you add to this, Mimi?

MIMI YANG: I think that was an excellent overview, Jose, so maybe I'll just tack on with a few more examples. One would be the Macro team's interest rate views. The Macro team here contributes to views based up and down scenarios for interest rates. The Investment Committee will use these to evaluate risks for different strategies and this, for example, can influence duration considerations for our fixed income strategies. Another one that relates to one of the examples that Jose mentioned earlier are the currency views of the Macro team. The Macro team regularly meets with portfolio managers from the Global Equity Strategy team to discuss the outlook for certain currencies and help evaluate whether currency hedging may be appropriate.

STEPHANIE NOTOWICH: As we look out over our three- to five-year time horizon, what are some of the key themes that we're currently tracking in light of what you have all said so far?

JOSE URSUA: I mean, there's certainly a lot, and part of our job is

to attempt to prioritize all of the things that happen at the same time, and try to say this is the question that we should focus on. To give you a laundry list of things that we're keeping a very close eye on, first and foremost, central bank decision-making. As you know and you mentioned before, the tightening cycle, not only in the United States but elsewhere as well, has been pretty aggressive and this has a significant impact on economic and market outcomes. The second, very related to that, is how inflation evolves, and when and whether it will peak in the United States or elsewhere, and how it may have repercussions in policy decision making. The third would be recession risks. There are tons of concerns around the potential for an even sharper slowdown. The fourth would be COVID-related, some lagging effects—for example, significant changes in the labor market. Another would be elections. There are elections happening all over. As I mentioned before [an election is going on] in Brazil, but then there is also a mid-term election coming up in the United States and so on. Then there are also slow burning types of macro dynamics, including, for example, demographics or structural issues that we happen to care about. Mimi, you can bring up a bunch more.

MIMI YANG: As Jose mentioned, there is certainly no shortage of topics that keep us busy, but a few more that come to mind include geopolitical risk. Right now, Russia-Ukraine, as well as U.S.-China, are at the top of the things that we're looking at, but there is certainly a whole range of geopolitical factors to consider. Speaking of China, there's a lot of focus on China as well, both in terms of how China now navigates challenges around its COVID policy and the property market downturn, but also longer-term we're thinking about the challenges and opportunities associated with China's structural transformation. Commodity prices—that's certainly an important input into our macro outlook. We're looking at both kind of the near-term supply shocks and how they impact different countries and markets, but also thinking longer term about what the implications of energy transition and decarbonization. Maybe touching on some of the slower-burning kind of structural factors that we continue to evaluate, that Jose mentioned some of earlier, I would add to that list supply chain diversification, technological change, and ongoing digitalization.

STEPHANIE NOTOWICH: Perhaps we can just pick a couple of these and zero in on how they're impacting the portfolio. Inflation has been top of mind for all, and a persistent headline issue. Jose, you have contributed to a research paper recently. Perhaps you can talk about the framework of your analysis in this area.

JOSE URSUA: Absolutely, and as you said, this is one of the questions that we've been grappling with, trying to make the best possible investment decisions for our investment horizon. Let me start with some data points. Obviously, the inflation picture is quite ugly. In the United States, headline CPI [Consumer Price Index[1]], meaning the top liner of inflation, is running at about 8.3%. The core measure of that, meaning the one that excludes some of the most volatile components, is running at nearly 6.3%. The PCE [Personal Consumption Expenditures[2]] inflation metric that the Fed likes to look at is at 6.3%, and the core measure is at about 4.6%. These are numbers that are quite high.[3] The headline numbers I just mentioned are the highest since around the early eighties, so you're talking about a four-decade-high level of inflation. This poses a big challenge for central banks because they have not seen this in decades and are responding to that pretty forcefully. In line with what I described before about our distribution or probabilistic view of the world, part of that effort entails, let's get all of us in one room and let's try to do the kitchen sink of all the factors that could drive inflation upward and other factors that could drive inflation downward from here. The factors that could drive inflation upward, I'll just list five of those:

- The first one relates to the post-pandemic recovery in aggregate demand. There's obviously significant pent-up type of expenditures that we experienced over the course of '21 and there's some lingering effects today, as well, in 2022.
- The second would be wage growth. It's been pretty significant and this has repercussions in the way that wage contracts are negotiated, and then that has inertial effects on inflation.
- The third one relates to the persistent impact of the Russia-Ukraine conflict and, as Mimi mentioned before, this is a top-liner geopolitical risk that can have significant impact on oil prices and other Energy prices, which then feeds through or pass through to inflation.
- The fourth would be lingering supply side constraints. I mean, there's been a significant relief of the supply chain problems that we saw earlier this year and perhaps in late 2021, but there are still some around.
- The fifth one would be Fed's new policy framework, which apparently, or at least before this outburst of inflation, tended to be more favorable towards keeping inflation relatively higher to make up for years of shortfalls below the targets.

On the other side, what would be some of the factors that could drive inflation downward? Well, first and foremost, monetary and fiscal policy tightening. These have a significant impact on dampening aggregate demand and thus leading to potentially more disinflation types of outcomes. The second, there are globalization and technological drivers that bump up competition and then in the end, this ultimately can be disinflationary. The third, if you look at it from an historical standpoint, there is less bargaining power on the side of wages, and so although wage growth has been pretty significant, the bargaining power and the potential of these wage increases to stick is lower than it used to be before, say, in the 1970s. The fourth would be income inequality. I'd say perhaps a fifth one is the anchoring effects. There are still very anchored inflation expectations, especially if you look at the longer-run picture, and the survey-based or even the market-based measures still point towards the belief that inflation will return towards Fed's funds, towards Fed's target.

From our perspective, what are our three scenarios just to simplify the picture? The baseline scenario is one where inflation returns over our multi-year inflammation horizon to the 2% or 3% range. We have high conviction of that as we net out the effects that I just mentioned. Around that there are two alternative scenarios. One is the alternative scenario where inflation falls below that. Call it between 1%, 1.5%,

and 2%. The other scenario is one where inflation goes to 3% to 4.5% over our investment horizon. At present, it looks as if that second outcome has higher likelihood than the former one, which is the one where inflation would be lower, partly because inflationary pressures are pretty strong and reverting some of this, especially because they've been driven by sticky components of inflation, is going to prove difficult. Ultimately, we think policy will succeed. The question is at what costs it succeeds. That would be, I'd say, a good summary of our inflation views.

STEPHANIE NOTOWICH: That really leads us into one of the biggest tools that the Federal Reserve has to address the inflation issue, and that is rates. Rates have been rising in the United States after a very prolonged period of low-rate environment post-financial crisis. Mimi, when and at what level do you expect rates to normalize, and how are we thinking about rates within our strategies?

MIMI YANG: Great question, Stephanie, and it has certainly been a dramatic year in the rates markets. Just to add some context, at the start of the year, the federal funds rate was at the zero lower bound, and the ten-year treasury yield was only 1.5%. Over the course of recent months, we've seen the Fed hike to 3.25%, and the ten-year yield reached almost 4%. We do think that the Fed will continue to take rates further into restricted territory this year and will likely keep rates there for some time until there is clear progress on inflation. We expect this to be the case even as the economy slows down sharply in the meantime, because the Fed will be more hesitant to ease as they did in past downturns, given the focus on preserving inflation targeting credibility right now. As we look out over the medium term, I'd say our base case for the ten-year yield is roughly in the 3.25% to 3.5% range, and this is still on the view that we think the neutral real rate in the economy should be moderately positive. We think that inflation eventually returns to the 2% to 3% range Jose discussed earlier, and we think there should be a somewhat higher term premium than what we have been used to in the past to account for the higher degree of uncertainty now around the longer-term outlook. Putting all of these together, we think this gets you to a base case ten-year yield in the low to mid-three percent range. You also referenced the prolonged period of rates since the financial crisis, and looking back, I believe since 2009, the average ten-year yield has been just a little over 2%. Going forward, we do expect more rates to normalize at a higher level than what we have been used to, but at the same time not excessively so.

You know, Jose spent a lot of time earlier discussing how we think about the range of outcomes and that's certainly applicable to our view on interest rates as well, and there are both downside and upside risk to the scenario that I described earlier. On the downside, we could see a much deeper recession, or on the upside, we could see inflation, as well as wages, be much stickier and less sensitive to the economic growth picture. Because of that, we try to think about scenarios or rates in the down case and an up case, and we generally put this range over our investment horizon at around maybe 2% on the downside and 4.5% on the upside.

Maybe another interesting point to touch upon is how we think about our investment strategies in light of our interest rate outlooks. I would highlight that we are constantly monitoring and analyzing, as well as managing, interest rate risk across our investment strategies. Some of the factors that we consider when we're looking at this include: how these strategies are likely to perform across the different interest rate scenarios we think are reasonable, how do our views compare to what's priced in by the markets, and does the absolute level of yield compensate us for the expected risks? Also, you know, we spend a lot of time thinking about how interest rate risk in our strategies correlate with other risks that might be present.

STEPHANIE NOTOWICH: As we walk this tightrope between the normalization of rates and addressing the inflation concerns, Jose, what is your assessment of the likelihood of a U.S. recession in terms of the depth and duration, and how are we mitigating that potential risk within our strategies?

JOSE URSUA: Absolutely yes, another big topic for us. Let me start by saying this: when you hear people talk about recession, I think they're not usually careful to say explicitly what they're talking about. Recession in technical terms is basically two consecutive quarters of quarter–over–quarter negative growth in GDP. These are called "ex-post" by the National Bureau of Economic Research. It's actually a relatively easy threshold to cross, and people don't care to distinguish very much. We don't really see it as an on-off switch. We rather see the gross picture, especially over a multi-year horizon, as a shade of gray. It's basically a continuum that does happen to have a zero line between. But, we need to be more careful when we talk about what type of recession we are really discussing here. One useful way of looking at this is that there are relatively shallow recessions, meaning a significant slowdown in growth, but not that destructive. Then, there's a deeper type of recession and if you look at historical U.S. data for several decades, 1.5% decline in GDP appears to be a good threshold to have in mind. Anything that's better than that would be what I'd call a shallow recession; anything worse than that or deeper as a contraction of that would be what I'd call a deep recession. What are the probabilities assigned to this? If you look at the different asset classes—and this, again, is part of the headlines from several news outlets or commentators—the probabilities vary significantly. There are asset classes that are, for example, reflecting and probably they have about a quarter percent, 25% of risk of recession. Other asset classes, for example some pockets of the equity market, are pressing something closer to 90% for the next 12 months or so.

Our view would be the following. If I had to summarize it very succinctly, that there is about a 50% chance of, what I called before, a shallow recession. That means okay, this risk has risen over time and the more, as you just mentioned, the Fed over-tightens—we don't really know what "over" means—but the more that they tighten without having a perfect crystal ball of how that tightening is going to happen, the more likely it could be that we go through that because they'll "overshoot the deceleration" that they're trying to get the economy to go through. When it comes to a deep recession, we think that perhaps a quarter or 25% would be a good number to

have in mind. These are not insignificant numbers, and so the fear, I think, is warranted. From that perspective, we've tried to do a few things related to our strategies. We've stress-tested a variety of our exposures, and I highlight three ways in which we try to mitigate the potential impact for recession.

The first is because we're value managers, we're exposed to significantly cheaper segments of the market in our exposures. We usually find key facets that we think are cheap for reasons that are not likely to persist over our multi-year investment horizon, and this affords us some sort of a cushion to underperformance if the economy really sags significantly or slows down significantly. The second way is by being very careful about our security selection. Because we do the bottom-up type of research, we look at balance sheets of companies, or we look at the balance sheets of countries very, very carefully. We try to stress-test them and see what would happen if we tweaked new growth significantly and engineer some sort of deceleration that will be very significant. How would this company fare, or how would this country fare, or how would this country currency fare? Then, the third way is essentially that we expose the core strategies to themes, and these themes sometimes have mutually offsetting characteristics in ways that if you say outcome X materializes with the economy, some of its exposures will do relatively better, some of its exposures will do relatively worse, but as a whole we try to position the portfolios to perform relatively well in a variety of the most likely type of scenarios that we could have in mind, including one for growth decelerates significantly, possibly into a recession.

STEPHANIE NOTOWICH: There is certainly no end to the geopolitical issues that are top of mind, and as you pointed out, Jose, sometimes geopolitics take a front seat. One region of the world that has really come into sharp focus is the conflict in Ukraine and Russia. Mimi, perhaps you can touch on some of the work that you've done in that area.

MIMI YANG: We think that the shock from the Russia-Ukraine war will have lasting geopolitical effects for years, and maybe even decades to come. And one of the areas where we have seen significant dislocations are in the global commodity markets. Not only are we seeing very differentiated impacts across different types of commodities, we're also seeing very differentiated impacts across different countries. For example, this creates large challenges for countries that might be large food and energy importers, but potentially there could be some benefits for countries that are major exporters of some of the commodities that have seen the largest supply disruption. Europe is also another region of the world that we think the impact of the Russia-Ukraine war will be particularly important for, and this is not only because of Europe's higher dependence on Russian energy, which is expected to lead to some near-term pain. But over time we think there could be longer-term opportunities that arise from an acceleration in investment in, say, alternative energies as Europe moves away from Russian energy. Also, we think there'll be more opportunities due to increased investment in areas such as security and defense.

STEPHANIE NOTOWICH: And what about U.S.-China relations? Could you touch on that as well?

MIMI YANG: Of course, yeah. Certainly a very important relationship for the global economy. Over recent years we have seen U.S.-China relations continue to deteriorate, and we think this increased competition and further decoupling, especially in sensitive sectors such as Technology, could continue over time. Another element of the geopolitical risks are the risks of a potential military confrontation between Taiwan and China. As mentioned earlier, this is an area that we are paying close attention to. If this risk materializes, it could have significant global repercussions in orders of magnitude larger than what we saw from the outcome of the Russia-Ukraine war.

If I can touch on a slightly related topic that comes to mind, that would be supply chain diversification. Over time, I do think that geopolitics and the prioritization of national interests will exert a greater influence on supply chain decisions than we have seen in the past. This is really a theme that began a few years ago with U.S.-China trade wars, and we've seen this further compounded by challenges experienced during COVID and the Russia-Ukraine war. It'll be a slow-moving process and we certainly don't expect a reversal of globalization, but we do think companies and countries will be more intentional about where and who they do business with. This could obviously lead to rising tensions but, in our view, it can also create new opportunities in certain industries and regions.

STEPHANIE NOTOWICH: Well, it certainly sounds like the macro environment is going to be complicated for quite some time. Is there a headline message that you both would like to leave with our audience as we begin to wrap up our conversation?

JOSE URSUA: I can take that, and I'll say that if I pick up what your questions imply and the answers that Mimi gave, and the answers that I gave, the top message would be Dodge & Cox remains at its core a bottom-up, fundamental research-oriented firm, and that's how the decision-making is made. However, we have significantly enhanced and complemented our very strong DNA, with also the usefulness of the macro inputs that our team is responsible for producing. We try to do this in the same way that research analysts have been doing research for decades, meaning it's very rigorous, it's very detail oriented, and it's based on a very strong sense of teamwork and team spirit. It's very open to ideas from all sorts of ways. It's very probabilistic in the way that we put our scenarios together. It's value oriented and it's multi-year focused. All of these are very analogous to the way the firm has been traditionally doing bottom-up research. I'll say another last one, which is, we do everything with one single goal in mind, which is obviously to best serve the interests of our clients by putting forward the best possible investment ideas that we can, through thick and thin. When the world gets complicated, I think the macro comes in particularly handy. As you just hinted at, it's likely that the world continues to go through significant periods of uncertainty that's macro related, and it'll be a helpful input as we go through these cross-currents.

MIMI YANG: Yeah, I 100% agree and couldn't have said it better myself.

STEPHANIE NOTOWICH: Wonderful. Thank you for this fascinating discussion, Jose and Mimi. And thank you for watching. As always, please don't hesitate to reach out and contact us if you have any questions.

1. The Consumer Price Index (CPI) is a measure of the average change over time in the prices paid by urban consumers for a market basket of consumer goods and services.
2. Personal consumption expenditures (PCE) measure how much consumers spend on durable and non-durable goods and services. PCE is the Federal Reserve's preferred measure for inflation.
3. All data referenced are as of September 28, 2022.