



PART 2: INVESTING THROUGH GLOBAL DISRUPTION

Sri Jegarajah

Thank you, everybody, for staying with us. Let's move on to our next panel, "Investing Through Global Disruption." As we heard, as I'm sure you've been hearing for quite some time, the investment landscape is evolving alongside the global economy. We have to deal with higher capital costs, geopolitical uncertainty, and shifting technological innovation, and all of this is reshaping public and private markets. So, how are leading investors adapting to all of this, and how are they shifting or changing asset allocation and investment strategies, and where does that conviction lie? Let's bring in our panel, and we are privileged to bring together three titans of global investment representing venture capital, sovereign wealth, and state-owned investment strategies. Jenny Lee joins us, senior managing partner at Granite Asia, Carlos Obeid, chief financial officer of Mubadala, and Rohit Sipahimalani, chief investment officer at Temasek. Please join me in welcoming our panelists.

Carlos, if I can start with you, let's address the macro environment immediately. You operate globally, but you're anchored in a region, in the Middle East, that is all too familiar with the geopolitical complexity. In an environment defined by both regional friction and higher cost of capital and funding costs, how has Mubadala shifted and adjusted the framework for assessing opportunities in the long term?

Carlos Obeid

I think the important thing to know is that we operate in a region that has known instability for a long period of time, so it's not new, both economic and political. And if you go back in history, let's say to the end of the 19th century and the early 20th century, the main economic activity in the region was pearl—pearl culture and pearl trading. And by the mid-'20s, Japan came up with synthetic pearls. That created a massive disruption, which coupled with the Great Depression at the end of the 1920s, created a lot of hardship. And that went on until, presumably, the discovery of oil in the late '50s, early '60s. And since then, there has been a revival of the economies. However, the leadership of the country knew that they can't afford to go through another period of hardship, and they had to diversify. So, the whole thesis of the economy was how to diversify away from this oil and gas, and a number of strategies were put in place. One of them was to establish a fund to balance a little bit the ups and downs of oil prices going up and down. The second one was to establish a network of economic and political partnerships across the globe. And third was to diversify the economy away from oil and gas, and we have seen the efforts of that across different activities—in industry, in hospitality, in financial services, to name just those. As a result of that, non-oil GDP grew from 30 percent at the beginning of the federation to almost now 70 percent.

And the same thing can be done about Mubadala. So Mubadala is more or less relatively new. We started operating about 22 years ago, and our strategy has been aligned with that of the government—to generate returns, but at the same time, to help integrate the UAE economy in the global economy. And the way that we do that is also by partnering with the best companies. We are a private equity investor, mainly, both direct and indirect, and we focus mainly on four main strategies. The first one is now the energy transition; the second one is technology everywhere and what that means across different factors; the third one is reshaping of the global supply chains, given the disruptions that is taking place; and the fourth one is the evolving consumer, and that's mostly around the aging population and the emergence of the new ways of consumer with this new generation. So, when you take all of these, these allow us to create a little bit of a distinction when we invest, and that allows us to create some alpha. And that's how we generate the alpha that we have. Because if you are too diversified, then you can't really beat the market, and our aim is to beat the market, and therefore you need to focus, you need to concentrate. And what we have done also is make sure that we have these global partnerships with international companies, both from the asset management side—so when we invest indirectly, we have fairly good partners with us—and when we invest directly, we tend to do that with the best people. Also, what we try to do is to make sure that this concept of resilience and the concept of going through the hardship is ingrained at the level of the investee companies, because it's important for us to be able to manage our investments throughout the periods, to continue to invest continually.

Carlos Obeid

For example, last year we've invested about \$39 billion, which is roughly 10 percent of our AUM. And our aim is to continue to do that throughout all the vintages. So, every year we want to do more or less that same amount. So, we need to rotate the portfolio at around the rate of 10 percent, so we sell or we get distributions of about 10 percent of the portfolio, and we invest about 10 percent of the portfolio throughout the period. So, it's important for us to make sure that we have no surprises, so we manage for resilience.

Sri Jegarajah

Thank you for that, Carlos. The challenge—and Jenny, let me turn to you—is that the entire AI investment cycle and the investment boom is under siege right now, arguably, from a number of factors, whether that's the fear of over-regulation, even existential risks that have shown up in the Anthropic IPO, and Dario Amodei himself has said that this is technology that is arguably out of control. How do you make—or how do you inform, given this confluence of challenges—how do you inform a long-term bet on a technology that is going to shape our lives and the economy in the future as we know it, fundamentally?

Jenny Lee

Right. Thank you, Sri. I think it's a great question. As Minister Vivian talked about this morning, with AI, we are going into the gilded age, right? And that means we are going to go into an age—maybe the next 10, 20, 30 decades—where new rules have to be written to figure out how to accommodate, manage, and grow with this technology. So, a couple of considerations. I think today we have gone from an AI 1.0 to an AI 3.0, where in the AI situation, you have a couple of frontier labs owned in the hands of a few entrepreneurs in maybe one or two countries—

Sri Jegarajah

Is it moving too quickly, and is the risk real?

Jenny Lee

But today, we are now in a 3.0, where we have many multiple players, not just a couple of players. While AI and accessible models are being democratized, it creates a layer where there's a bit of a counterbalance. If you have a rogue player, the rogue player can be shut off and the rest can continue. Hopefully, we have more good players than rogue players. So, I think that's one—the fact that we now have access globally to different types of open-weights and closed-weight models means that open-weights actually allow governments, companies to now start to build safety guidelines, safety rails around the product that they are building, whether it's for AI for creation, AI for science, and AI for robotics, for example. So, I think that's one. The fact that we are moving forward and access, I think that's great. And number two, increasingly on the startup side, we are now starting to see a new batch of startups that are doing the check and balance and the rails. For example, startups are trying to figure out—offering a neutral platform, much as in the past where you had the auditors come in, you have the QA come in before models are being released to the larger application market. It's happening. We are seeing startups that are also creating rails for physical robots. When you start to have robots interacting with humans in the public physical environment, you're going to make sure and want to make sure that the robots are safe and being tested—not by the guys who created robots, but by a third party. So, again, rules are being written, but we're starting to see those startups coming up.

Sri Jegarajah

So, you would come down on the side of outside agencies, government, as opposed to self-regulation, or do we need a bit of both? And the other challenge is: Is there a risk that the pendulum swings too far towards regulatory overkill, and that stifles innovation?

Jenny Lee

That's right. I would say that you need both, right? I think companies that are building robots, software, testing software, they need to have it innate in them to consider safety as a product feature, not as an afterthought. But just as we were in the early Web3 areas—Web3 is not about decentralized and no one cares, right? Then you need the second lever, which is a bunch of new startups. New rules are being written to try and set if the bot's going to be, for example, operating in Europe or Asia or US, what kind of local requirements are they required to adhere to? If they're going to a hospital environment, what kind of hospital guidelines are required? So, I think that we do need the private-public, and learn-as-we-go consideration in the wake of a new technology disruption.

Sri Jegarajah

Who, then, from Granite Asia's perspective, Jenny, is doing the best work in this field, and who's doing the most responsible work in this field?

Jenny Lee

Well, I would say that across the startup—when we talk to our startup—my view as a GP—so, obviously we talk to our founders, it is top of mind. And it goes from the startup founders who're actually using all kinds of models. They are testing the models because, as I mentioned, it's not just one model. They're not stuck to one model. Their ability to be able to use multiple models, train them, guide them, I think that's one layer that's happening as they decide what model to use. Redundancy, resiliency applies similarly to the usage of models. And then as we go into the environment, it's the industry who is actually coming up with requirements. If you want to have a flying car today, the flying car technology has to adhere to helicopter safety. So, to the extent industries are able to extract

similar safety rules, I think that's being applied. When we put AI in agents in embodied hardware, it's actually a scarier proposition. In a way, software, you can still try and shut them down—kill switch. In a hardware situation, more has to be done in collaboration with the industry to establish the rules.

Sri Jegarajah

We're hearing lots about kill switches these days, Jenny. Thank you for that.

Jenny Lee

And kill switches have to be both hard and soft.

Sri Jegarajah

Yes. Rohit, I want to come to you, and I want to just pivot. I want to stay with disruption and pivot once again to the geopolitics because despite the geopolitical disruption and this kinetic war in the Middle East, Temasek is deepening the push into that region, opening offices in Riyadh and Abu Dhabi. Give us some color, then, on what's informing that decision and how you see the risk-reward in the GCC markets and the overall markets in the next three to five years.

Rohit Sipahimalani

In general, we are operating in a period of heightened uncertainty, and I don't think that's going to change, whether it's geopolitics, whether it's AI, whether it's climate, whether it's inflation, whether it's debt sustainability. And really, if you just get paralyzed by that, you're not going to do anything. So, the important thing is that you've got to construct a portfolio that is relatively resilient across different environments.

Sri Jegarajah

Sorry, Rohit, can I just ask this question? You just enumerated very eloquently the balance of risks there. Do you feel that something is going to break? And what could lead us to, potentially, a credit event, a bond market event? And when you look under the hood at all this AI-related debt out there, are there any warning signs?

Rohit Sipahimalani

If you look at the last four years, the four times when the market S&P has corrected more than 10 percent was when, one, in 2023, yields crossed 5 percent. Once, earlier this year, when oil crossed \$100. The third time was when the Japan carry trade was being unwound in August of 2024. And the fourth was during Liberation Day. Two of those have happened just very recently, right? Your yields crossed 5 percent. In fact, you've had a 90 basis points jump in yields in the third quarter, which is the sharpest increase since 1994. So, all things that are happening, even the Japan carry trade is under question right now, whether that could be unwound. And yet you have the S&P trading at all-time highs. And why is that? And it's really one factor, which is AI and the earnings momentum around the key players out there. I think that is what is supporting the market. So, what could go wrong? Yes, if the AI narrative sort of is unwound because of either safety issues, because of regulation, because of as we go through 2027, if end users don't see sufficient ROI, yes, there could be issues. I think that probably is the biggest risk to the market—the AI narrative. Right now, it seems very strong—the other issue, I guess—

Sri Jegarajah

Even in a high rates environment?

Rohit Sipahimalani

Because that sector is relatively interest-rate-insensitive. The returns that people are getting or the people who are spending money on AI, they have strong balance sheets, and whether rates are—for them, borrowing cost at 6 percent or 7 percent is not really going to make a difference. Which is why I don't think rates is what unnerves the AI trade. Rates is hitting a lot of other parts of the market, so whether it's REITs, whether it's housing in general, whether it's consumer discretionary... In fact, if you've seen the Russell 3000, about half of those stocks are 20 percent below their highs in June. It's just not showing up in the index, which is dominated by large-cap AI names. So, if you're asking me what can go wrong, I think unwinding of the AI trade is the biggest risk. We don't see that as imminent, but will you have bumps in 2027? Yeah, possibly yes. The other issue, of course, is—associated with rates, there's concern around inflation. And if that remains sticky because of energy prices, because of supply chain disruptions, because of wars, with El Niño, you're probably going to see food inflation pick up. So, I think inflation is a risk. That, together with what's happening in the rates environment, if that continues going, there probably is a risk of some breaking point at some point on the equities market. So, I think those are probably the two key risks I would see for 2027. At this point, it's really AI-driven. It's an AI-driven market, and that narrative is still quite strong.

Sri Jegarajah

To your point on inflation, I'd be interested to know what, Carlos and Jenny, you think about this. Do we, as longer-term investors, essentially buy companies that have monopoly or near monopoly or oligopoly in positions or effectively pricing power? And that is the conversation with AI until that moat becomes unsustainable, whether it's because of China competition or otherwise. Carlos?

Carlos Obeid

I think the way to approach it is to think about it as a business model. What these companies that we're investing in have as a base of the business model, and how is it able to sustain shocks or different business environments. It all starts with that. Do you have the right management team? Do you have the right business model? Do you have the proper financial and capital structure in these companies? And at the end of the day, those environments will continuously change. Inflation can go up, it could go down later on. New markets will open up, other markets will close down. The important thing is to have agility, flexibility, and resilience in these businesses.

Rohit Sipahimalani

If I can add to that, Sri, I think the key point here is that we don't know how inflation is going to play out over the next few years. We are concerned about inflation being high in the near term. Longer term, AI can make inflation disinflationary, so you could see that. But we don't know. And really, in the past, most portfolios were very biased towards growth. We just need to make sure our portfolios are balanced, having enough inflation beneficiaries along with the growth beneficiaries. So, a greater share of commodities, more infrastructure, those are the sorts of things which help add resilience to the portfolio, making sure you have balance out there.

Jenny Lee

Right. So as a VC, we don't try to beat inflation. We're trying to create a next category, 1,000x. So, in the AI area, to be fair, we are seeing companies—say in the AI drug discovery area, it used to take 12 to 15 years to come up

with one molecule or one drug. Today, with AI transformation, we are seeing companies, 150 people, four-year-old company, creating 20 to 30 molecules, generating immediate revenue growth that is double, tripling every year, and profitable. So, I think the business model as we know it has changed. I think to both Rohit and Carlos' point, we are seeing one-person unicorns, because they can build in the ether with all the models out there and then be able to generate revenue almost from day one. We are seeing companies, when they think about supply chain with the resiliency—modular manufacturing is coming to market. You don't need a facility that takes a billion to build. Companies are coming to market with factories that they can yank out and move around. And that's very important because with automation, AI is actually making modular the back end. Also, it thinks of the future. And then lastly, while we may talk about software as a service, AI as a service, today we are seeing robot or hardware as a service, where automated end-to-end equipment are now replacing humans, for example, in the area of chemistry. And so, instead of hiring 1,000 chemists, you just have to build 10 separate lines of equipment that could generate, for example, 10,000 chemistry reactions a day. Right? And so, the business model that we're seeing being transformed, it is very different from what we've seen over the last 30 years. And so, we are thinking, is this going to be 10, 20, 30, 50x? Is this going to be the Anthropic that's going to go up to the trillion? That's actually the conversation right now. But of course, among that, it's about AI safety. Is this going to be a train that's going to go off the rail? So, I think the real conversation is happening, but the excitement of the next generation is very transformational, and we haven't gotten to compute in space. That's a different—

Sri Jegarajah

No, we haven't. Although, Elon and Orbital Data Centers, he's got a vision and a plan for that. You mentioned Anthropic, Jenny. What are these multi-trillion-dollar pre-IPO valuations telling us? Are they all a bit wacky?

Jenny Lee

Well, this is a company that in the last three to four years is now running at \$60 to \$70 billion of revenue runway. So, similar to my earlier conversation, we haven't seen the likes of companies like that, that can accelerate quickly, in a short period of time, being able to monetize. They have addressed one huge horizontal application, and that's coding. And I think we are all looking to see what they're going to do in AI for drug discovery. Right? Which is native to what I mentioned. Are there more verticals? I would say valuation is something we always talk about, but in hindsight, always feels like it was pretty cheap then. So, I think we have to balance both this view. As long as companies are creating brand-new models, disrupting huge verticals, actually that journey is not completely told yet.

Sri Jegarajah

Carlos and Rohit, from Mubadala and Temasek's perspective, how are you approaching some of these frontier companies?

Carlos Obeid

From outside, obviously, you can't ignore these things, and as I was mentioning, one of the themes that we have is technology everywhere. And given where the valuations are, there isn't enough capital available at—let's say, at the Mubadala level or—to invest. So, we have to rely on partnerships and that's why two years ago we created MGX, which is one of our third-party capital management units, to be able to expand the pool of capital that's available for us to be able to invest in these companies. Nobody can sit on the sidelines of that. But we have to do it through a disciplined approach. Valuations are what they are. They're built on—as Rohit was saying—on an estimate of how these earnings are going to grow. Things may change, so you need to be careful in how you deploy that capital and

not just focus on one segment of the value chain, but across all the elements of the value chain, whether it's data centers, whether it's applications, whether it's the language models, and so on.

Rohit Sipahimalani

I would say to the last point just mentioned, it's important to look at portfolio construction even as we look at our overall AI exposure. So, at one level, we want to be in things which are more stable, so the data center, energy infrastructure, which are backed by 15-, 20-year contracts with single-A, double -A counterparties with more predictable cash flows. Returns will be lower, but still pretty attractive and more stable. Then we want to operate at the chip layer, at the cloud layer, at the models application layer, and at each level, the risks are different. Clearly, in models and applications, probably the risks are higher. Upside is higher, but with a wider variation of outcomes. So, we construct our portfolio to make sure that, looking at risk and reward, we are balancing the size in each segment. One of the things we recognize is that AI is such a fast-changing environment that things could change quite easily, and you have to be able to pivot. Today, about half our AI exposure is public. We want to increase that number, ideally to about 70, 75 percent. It gives us more flexibility to pivot with changes in the environment as against being stuck with a private asset, which—there's little you can do if things are changing. Yes, we do want to be and we are invested in the models—for example, you mentioned OpenAI and Anthropic. But the size of exposure there would be different compared to some of the other areas where we have more flexibility. So, we think about, overall, our portfolio construction quite seriously as we look at our AI exposure.

Sri Jegarajah

There's a parallel event and conversation going on at Token2049 here in Singapore. I'm just wondering, are we seeing adoption of digital assets to the point where it is now becoming institutionally investable? We've seen some developments—positive developments maybe—on regulation, tokenization, wider adoption. Is it an investable asset class, Rohit?

Rohit Sipahimalani

Well, we do believe in the future of blockchain technology generally and tokenization of assets. So, it's an area we are invested in. Right now, the scale of opportunities out there, and the maturity of opportunities is not one where we have a significant amount invested, so we're sort of watching that space. But we do have investments out there, some directly, but often through VCs, to have broader diversification in what is still, I would say, an area yet to mature where we can deploy large-scale capital ourselves.

Jenny Lee

Where we are seeing a big application is actually in cross-border payment rails. And so today, if you are trying to transfer currencies from one country to the other—I think historically Swift is the de facto, but today, I think with the economies bifurcating, and currency fluctuation extremely unpredictable depending on what's the news of the day, we are actually seeing the fiat and non-fiat payment rails being set up and actually growing very well. So, merchants, countries, companies, individuals are actually ensuring that their money transfers when it happens are being hedged as it happens. And I think to be able to use fiat and non-fiat rails, stablecoins of the world for settlement actually is becoming quite a big trend.

Sri Jegarajah

Carlos.

Carlos Obeid

Same as Rohit said, I think at the end of the day, it's an asset class that you can't ignore. You have to be invested in it. You believe in the underlying technology. Some of those other things are very volatile. That being said, we have a small allocation to that sector, and we continue to monitor it when it becomes a lot more institutionalized and something happens like, for example, what has happened with Ethereum and Bitcoin with IBIT. So, we'll be invested, but it's something that you need to constantly watch and monitor.

Sri Jegarajah

We've got a minute or two left, and Jenny, I just want to end by bringing in China and linking it to this entire concept of disruption, especially in technology and AI. I hear constantly that the China AI champions—whether it's the LLM developers, whether it's the chip makers, or physical AI and robotics—are narrowing the performance and innovation gap with their US rivals. Longer-term investors, private capital, VC capital, is that where you need to be? Can't ignore this opportunity.

Jenny Lee

Yeah, I think China has gone from "China is not investable" to "Is China investable?" with a question mark, to now, today, the most common question I get is, "Are we missing out?" And exactly to your point, I think the infra is now diversified. The models are diversified. In the AI 3.0, we are going into what we call coldstream, which is where that data is not trainable in pre-training or on paper. And therefore, this is where, to be fair, China has strength because the factories are there. Data can be collected at the physical world. In the AI for drug discovery, the CROs are in Asia, in China, and the facility, the data is there in the labs that can be collected as well. And in areas of, say, for example, AI creation, Asia has a very diverse population, a different subculture. Asia historically has been quite good at generating the next TikTok, the next RedNote. And so, in consumer applications that rise on understanding the nuances, that's where we're seeing. So, the 3.0—actually Asia or China in particular, can play on all their historical strength that's been built over the last 30 years. And they are not about competing at the frontier model. They are about competing at the use case where a huge amount of learning data can be collected through physical usage, not trained on a pre-training basis.

Sri Jegarajah

Carlos, opportunities in China and in the broader region from Mubadala's perspective?

Carlos Obeid

I think, for us, Asia is very important, and we've been trying diligently over the last few years to increase our exposure to Asia. A few years ago, the share of the portfolio that was allocated or invested in Asia was about 10 percent. It has increased now to about 50 percent, and we want to do more. We've been present in China, mainly, South Korea, Japan, and India. And we want to grow those exposures because we believe that there are a lot of opportunities across all the strategies that I have mentioned earlier along the thematic that I have mentioned earlier. So, we need to do more in Asia, and where we have teams on the ground—we are having invested in developing a pipeline of opportunities for us across all the sectors that are important for us.

Sri Jegarajah

Rohit

Rohit Sipahimalani

Well I would say, in Asia—the big markets for us are China and India. Well, we haven't spoken about India because it hasn't had the AI story behind it, but fundamentally we still see it as a growth market.

Sri Jegarajah

It's an emerging AI opportunity.

Rohit Sipahimalani

Yeah, it's in terms of just—ultimately, I do think AI adoption has got to be important, and I think India will be there. But outside of that, generally speaking, it is an economy we see growing nominally at over 10 percent over the next five years. Energy today—the energy shock—has been an issue, but we see that as not being a permanent issue and, generally, as a long-term perspective, India has done well for us. It has been our best performing market in the last 10 years, and we continue to see pretty attractive opportunities when we look forward next three to five years. So that's one. China continues to be exciting. Jenny talked about biotech, in particular, is a very exciting area out there which we are investing in. Local consumer brands continue to be important. And then I do think that in the AI hardware value chain, like China has in many other areas of manufacturing, I think you will see more and more competition from China and whether you invest in the companies or not, you have to be aware of what's happening because it's going to disrupt what is happening elsewhere globally in the AI hardware value chain. The most, the area, the which they are the very dominant right now is in optical transceivers etc., but there are other areas too which they need to invest in.

Sri Jegarajah

Rohit on that note, we will wrap up our panel. I am very grateful for all your input, your thoughts. Thank you very much indeed.

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