

Welcome to Industry insights with KPMG Economics – Technology edition. Industry Insights with KPMG Economics is series featuring chief economist Diane Swonk, who will be exchanging ideas with the national sector leaders here at KPMG.

In this edition Diane and Mark Gibson, Global Sector Head for Technology, delve into the challenges encountered by the tech sector. From the influence of rising interest rates on investment to the intricacies of a constantly evolving workforce, they explore the landscape of the industry. Let's get started.

**Diane Swonk:** Hi Mark, it's great to be here with you and talk about a little bit difficult industry these days. I really want to get into how the tech industry is kind of looking like a lot of other industries, and publicly traded companies out there, having to manage more towards quarterly profits rather than the long term we had really seen for so long. How is how are you seeing the tech industry right now? And handling some of the challenges they're facing.

Mark Gibson: Yeah, thanks, Diane. Great to be here with you, and it's funny. We've always said the tech industry is volatile, but it's been on a great ride for so many years. We start forgetting that that volatility does exist, and we certainly have seen some headwinds lately. I think it started with interest rates going up, and you know the investments this tech companies were making started to slow down and they hired a massive numbers of employees over the last few years. You've certainly seen the headlines over the past 3 to 6 months about the layoffs that have happened in the sector and the deal market certainly being a little bit dry right now has certainly impacted these companies quite a bit. So, what we're seeing, particularly with the big tech companies is a real pressure on cutting costs, managing earnings, you know, like we've always seen with our other industries on the quarter to quarter, the earnings,

releases, and the stock prices reacting to the comments the executives make that's never really been the case in in Tech. In the last decade the tech sector seems to be reacting to all the forward-looking comments and the innovation and the things that they're driving not only to the tech sector, but across all sectors. So, we are seeing significant pressure on the sector now to meet earnings, to cut costs, to build that cost discipline that a lot of industries have had. That quite frankly for a lot of the execs and the companies that we talk to, they've never had to do that in the history that they've been in existence over the last decade or two. So, it certainly is a new time for tech and a 6-month period that's really been unlike what I've seen over my career.

Diane Swonk: You know it's interesting. You mentioned the point that these same tech firms hired up quite dramatically. In that you know onset of the pandemic, and I look at some of these firms, and one of them, in particular, hired up hundreds of thousands of workers. So, when they're laying off a record amount the first time ever against a backdrop of really ramping up, and maybe overshooting demand as it's plateaued at a high level. It's part of this whole frictions upon reentry we've seen, as this economy's reopened. It's been more challenging for these producers as well.

Mark Gibson: Yeah, I think that it's a great comment on the labor market. For years it's been hire anybody you can find. There's such a scarcity of the software engineers and the R&D. Teams and the computer scientists that that really fuel the innovation of a lot of these tech companies. You know, having to pay above market salaries to hire these employees, stealing them away from one another, so to see that slow a bit. In some ways it could be healthy for the tech sector. But the other thing we're seeing at the same time is significant demand from other sectors to get their hands on workers who have experience working in the big tech companies, and someone who's got that on their resume is all of a sudden really valuable to a health care company, or a real estate company or a consumer retail company, an energy company as technology sort of embeds itself, and all of the things they're doing as well. So, I agree with you. Some of this is just a right sizing of perhaps not forecasting the softness that we're in. But I also think it's a more permanent dynamic that we're going to see going forward.

As this demand for these, the tech sector workers across a broader more geographically diverse pool as well. They're not all working in the same 2 or 3 large metro areas, but we're really seeing that spread across the country and around the world. So, a lot of things at play here with the economy, the pandemic, and the advance of technology throughout the entire society.

**Diane Swonk:** I think about it in terms of the labor market issues and also productivity growth. And you bring up an important issue is that these workers are being picked up elsewhere pretty quickly. Now we have seen in the unemployment claims data some higher wage workers are now showing up from earlier high-profile layoffs. But that said in the tech sector, when they started announcing the layoffs, you actually saw job hoppers jump dramatically, right? And so, from an economic perspective this might be the first time we're finally seeing. After the period of the 2010's was a period where we saw a lot of investment in the tech sector in the beginning of the 2010, they got well ahead of anyone out there. And then there was sort of a loss of investment in the rest of the economy as they lagged behind. They got so far behind the tech behemoths they didn't even try.

**Diane Swonk:** And now you've got this talent being disseminated in the economy which could enhance productivity growth across the economy much more as that knowledge is dispersed. But it also is, you know, sort of how much the tech sector is changing more broadly and becoming more horizontal in the economy, and it's part of everything we do in every sector. Let's get into that a little bit in terms of how we think about it permeating all these different industries as well.

**Mark Gibson:** Yeah, it's something I talk about all the time is this phrase technology as a horizontal. And as someone who leads the technology practice at a professional services firm.

It's funny for me to say, but I always say I don't think I'm going to have a job 5 years from now, because I don't think there'll be such thing as a technology sector. Technology will be every sector and so we'll be talking more in terms of software and hardware and cloud, and those types of things as the sector that we've often called technology. But you know the way companies partner now, I think, is really unique. You're seeing lots of Fortune 500 type companies and other sectors, building alliances and partnerships with the big tech companies to achieve a desired outcome around production, around building their back office, building the way they go to market together, and firms like ours are quite frankly doing the same as well. So, seeing Tech's influence as a partner, and as an underpinning, I think of a lot of these companies is going to be interesting.

Mark Gibson: I also think, as you mentioned, 10 years ago as tech investment outpaced everyone else, I also think the tech talent got sort of got hoarded among a few players. The large companies had the power in the system, they were able to attract the top workers, they were able to offer them packages that others quite frankly couldn't match. And so we also have a unique position today where these stocks haven't soared over the last few years. So, we've got a lot of people working for these big tech companies who whose equity may be underwater if they started in the last few years. And so, it is maybe a chance to diversify a bit a chance for small startup tech companies to maybe get some top talent and build packages that would attract those types of people which I think is going to be healthy for all of us in the long run.

Diane Swonk: I mean it's interesting, because at one side of it we know that applications for new businesses, high propensity of those who want to hire absolutely soared in the pandemic, and they have not slowed down. So, even though one could see that the funding with the change in interest rates is not the free money we once had, the number of these applications out there is still running well over 50% of what it was in the 2010's, and so we're creating new firms, and they're becoming hiring establishments very rapidly. What should take 8 quarters for them to hire up now it's taking 3 months to 9 months. That's a big difference in terms of that. We think of this as more horizontal, but also the pressures and the uncertainty in the tech sector, and what they're facing in terms of regulatory pressures in terms of national security. What do we need to start thinking about? You know these tech behemoths are being considered in some ways as important as countries in terms of their influence.

Mark Gibson: You know they really are. You've seen some of the prominent economists and folks on the business news talking about the tech companies as the real superpowers of the world as we go forward, and that bears a lot of responsibility. It also bears a lot of attention from governments and regulatory bodies to pay attention to what they're doing, and how they're governing themselves and how they're conducting business. And so, a lot of the tech companies are becoming pseudo-regulated businesses and I think that's going to be more and more a focus that tech companies, either the established ones or the startup ones, need to build into their program. They need to have compliance programs to ensure that they're following all of the legislation and rapidly changing rules that may be different in one region from another and these companies generally have massive amounts of data, and there's a lot of regulation around data as well, so getting that right and building the muscle, memory and the infrastructure to be a compliance organization. At the same time, you're trying to be an incredibly innovative organization.

Mark Gibson: I just saw earlier this week the comment that you know Facebook was founded in 2003, I believe, and it was 15 years before the CEO was testifying in front of Congress. Now you have open AI, that was founded months ago, and this CEO was in front of Congress in a matter of months. So that's the attention that tech is getting today because of the prominence across the entire economy and

the entire world. And Covid did a lot of things, but certainly it accelerated the innovation in the tech sector, but we pivoted on a dime and tech firms' innovation were responsible for that. So, you know it's just another example of the way regulatory pressure and compliance with that. It's going to be a huge part of the tech sector's mandate going forward.

Diane Swonk: You mentioned earlier the geographical changes that we saw. We saw a tech migration. But you know, I think of the work from home and the remote work side of things, and I know the tech sector is kind of struggling with some of the same things that everyone is. But the United States is unique, and how extreme the work from home model, has a flip side to it in terms of downtown office spaces and our offices are utilized. But in terms of innovation, and how we think about the tech firms and the challenges of remote work. People aren't coming in, and now the tech firms have to deal with how to induce people to come back in. How do you see this point out in terms of the role technology is playing in terms of fostering person to person kinds of interactions. And what are they missing? What do they need? I mean, this is an area where I saw a bunch of tech firms initially say, we want you back now, early on and now they're not so.

Mark Gibson: Most of them have a memo three weeks later that clarify what they meant, and they said, we want you back. You know I tend to look at this as a positive, and the market tends to drive where we end up. We're going to have some bumps. It's been a bumpy return to work in tech in particular, because this is a sector that was highly concentrated. Geographically you know, you had to live in certain markets to really have a chance to play in the tech sector. You've seen for the last decade most of the big tech companies starting to build other campuses in order to access a labor market that didn't exist, and just so that trend was taking place, and it was like flipping a light switch of acceleration when Covid hit. So now you you've got this diversified workforce. You've got real estate, as you mentioned in in more areas. And then you talk about returning to work and trying to build teams that have worked remotely and through technology connection for some period of time, and I think, trying to find the secret sauce.

There is a certainly a belief in the sector that I work in. That innovation happens best in person. And so that is a culture that's an underpinning of the success of Tech and the future of tech that I think most of the

CEOs and board members of the tech companies truly believe in their heart. We've got to get our teams together to be the innovative firm that we want to be. But at the same time, we've got to retain the talent, and we've got to meet them where they are. And so.

Mark Gibson: Diane if I had the answer where this was going to go we'd probably be doing this on a different forum right now, but it's fascinating to watch. The other side of it, of course, is real estate, and we talked at the top of this broadcast about the cost pressures that a lot of these tech firms are facing in real estate, you know, behind labor is probably right up there in that cost, and where to put office space to meet the intellectual side of the work versus where to put the infrastructure and the data centers and all of the physical costs that these businesses have is another blending as well. And you know, I think you look at manufacturing history over 150 years, and you tend to build manufacturing facilities and then put offices next to them. You know, the tech companies have always been different. They've always had offices in the high-cost areas, and then the manufacturing and production in other areas. So, you know, that's

another thing to keep in mind as well is, where do you invest in back office? Where do you invest in data centers. And where do you invest in your true innovation and R. And D. Personnel? But to me you know, the first diversification has to be the answer that you know we're never going to go back to one campus, one city, one workforce and be competitive anymore. So, the firm that gets it right I think will have a big advantage.

Mark Gibson: Well, Diane, we could talk all day about the tech sector, and the impact of the economic cycle on our sector, but really, really fascinating conversation today. This, the intersection of all the things we've talked about make this a fascinating time, and one that it's. It's fascinating to watch where the sector is going. Thanks so much to you today to have a conversation with you about tech the economy and this convergence that we're all so excited to watch. So, thanks again.

**Diane Swonk:** Thank you Mark, we really appreciate everything you've got to. This is shining a light on a very tough subject, so we really appreciate it.

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That was KPMG's Global Sector Leader for technology Mark Gibson and Chief Economist Diane Swonk discussing challenges and opportunities for the technology sector. Subscribe to hear Diane's conversations with our other sector leaders from Energy, Natural Resources and Chemicals, Healthcare and Life Sciences, and Consumer and Retail.

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