Exchanges at Goldman Sachs

What's Behind the Tech Sell-Off?

Brook Dane, Portfolio Manager, Asset Management Division, Goldman Sachs

Peter Callahan, U.S. TMT Sector Specialist, Global Markets Division, Goldman Sachs

Allison Nathan, Host

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Alison Mass: How low can tech go? That's the question on everyone's minds as the once high-flying stocks of tech companies and the darlings of the pandemic continue to plummet in 2022.

Peter Callahan: What we've seen right now in some of the growthier pockets of tech is certainly akin to what we saw back in 2000 in that NASDAQ composite correction that we saw.

Allison Nathan: I'm Allison Nathan, and this is *Exchanges at Goldman Sachs*.

[MUSIC INTRO]

Allison Nathan: Is the extraordinary boom in tech stocks nearing an end? The broad tech sell off has wiped out trillions of dollars in market value since the start of the year. To help us understand the drivers and the road ahead, I'm sitting down the Brook Dane, portfolio manager in Goldman Sachs Asset Management, and Peter Callahan, a US technology, media, and telecommunications sector specialist in our Global Markets division. Brook, Peter, welcome to the program.

Brook Dane: Thanks for having us.

Peter Callahan: Thanks for having us, Allison.

Brook Dane: It's great to be here.

Allison Nathan: Peter, I want to start with you. We've obviously seen tremendous volatility in the equity market broadly, but certainly within the tech sector. It's been such a bright spot in the economy and in markets for so long. But it's obviously going through one of its worst stretches in years. So, give us so context. How bad is the current route relative to past downturns?

Peter Callahan: Yeah, that's a great question, Allison. It's something we wrestle with, institutional clients, every day here at Goldman. And just to give you a couple of data points and sound bytes for what we're looking at right now. If you look just at the tech index broadly speaking for the NASDAQ, for example, we're down about 30 percent off the highs. So, that type of draw down matches what we saw in March of 2020 during COVID. And really hasn't seen anything like that since '08 and going all the way back to 2000.

So, the magnitude of the draw down that we've seen already outpaces a lot of past experiences. But I think when you go a layer below that, what's more fascinating to me and what we're spending a lot of time with our client base every single day is looking at the growthier pockets of tech. So, we have tools like our non-[UNINTEL] tech basket, which tracks some of the highest octane growth stocks in the market. Or our growth software basket, that tracks some of the growthier stocks in the software complex. That basket is down 68 percent off the highs now. So, that peaked in the middle of 2021. We have now kind of retraced almost three quarters of that high that we saw of that year.

When I compare that 68 percent drawdown, let's just say to the NASDAQ composite back in 2000, that was also a 68 percent drawdown.

So, if you kind of want to think about sort of boom/bust cycles for tech or sort of big highs followed by quick reversals, what we've seen right now in some of the growthier pockets of tech is certainly akin to what we saw back in 2000 in that NASDAQ composite correction that we saw. So, there are things you can look at and say, even if the timeframe has only been about 15 months, peak to trough for that growth pocket of tech, whereas there was a 32 month drawdown back in 2000, the magnitude does look somewhat similar, albeit it a different instrument that we're measuring here.

So, it's been quick. We look at it anywhere from 30 to 70 percent over the last six months in terms of the correction.

Allison Nathan: So, traumatizing. We've had a traumatizing [UNINTEL] in tech here. So, I mean, the key question is why? Why did this happen? How did we get here?

Peter Callahan: Yeah. I think it's important to figure out where we are today, just to remember where we were and what got us there. And I think there are micro and macro answers for the where we were and what the starting place was. Right? I think the micro factors are relatively obvious and certainly somewhat influenced by COVID, in addition to a generation of sort of technology changes. Right?

If you think about COVID, you had a really push into things like streaming and e-commerce and digital payments and those types of big, thematic drivers that tech has a lot of exposure to. Those companies did great during COVID. Amazons and Nvidias and PayPals and Netflix and these big tech companies accelerated growth and took themselves to new market caps. So, there were certainly micro fundamental drivers that were intact over the last 18 months which builds on top of a lot of the Cloud and secular drivers we've been talking about for years. And that helped drive the fundamentals higher for these businesses.

I think at a macro level, there are some very unique circumstances as well, right? I think we had 19 trillion dollars of negative yield in debt globally. And I think one of

the words you're going to hear come up a lot in this podcast is duration. And I think what happened over the last, call it, three years, the last tail of this upcycle in tech was investors took more duration into their portfolios. And what we mean by that is both from a pure sort of mechanical perspective, interest rates were low. So, that discount rate where you're discounting future cash flows back is lower. And so, people added longer duration cash flows to their portfolio. But also just in somewhat of a time horizon perspective, right? I think investors moved out risk curve and willing to look out three, four, five years to value some of the businesses that we were looking at over the last couple of years. And I think that was the phenomenon that took us there.

At its peak, I think the FANG stocks had 10 trillion dollars of market cap. That's bigger than the GDP of every country in the world not named the US and China. Right? So, really, extraordinary set of micro and macro circumstances that got us there. Doesn't mean they're all going to go away overnight. But I think the market is just wrestling with the back side of that unique demand and macro backdrop.

Allison Nathan: While we think about that massive influx

into tech, did we get to a point where we were just really talking about a bubble? We saw so much froth. And this is really just froth leaving the market? So, if we think about the retrenchment that we have experienced, are we now kind of back at fair value? Were we just massively overvalued at that point? Or are we now undervalued? Peter, maybe you can start. And Brook, I'd love to hear your perspective on that too.

Peter Callahan: Yeah, listen, I think there are-- again, I kind of look at it and sort of tech broadly at the large cap space. And I think underneath the surface there were probably a couple pockets of euphoria, right? So, at the large cap space, the NASDAQ overall peaked at 50 times earnings back in 2000. We were trading at 30 times in the peak of this cycle. So, much more reasonable valuation. We're closer to 20 times earnings today for outsized industry growth. That doesn't feel super bubbly to me.

But if you did look at some of the growthier pockets of tech, for example, our growth software basket, it's something we track, it went from trading at six, seven, eight times revenue to trading at 15, 16, 17 times forward revenue. Right? So, there were pockets of excitement of exuberance

in the market.

I think we're back. We've retraced a lot of that for both of those pockets, right? Software names are now trading at seven times, eight times range right now. Kind of back to where we were before pre COVID levels. So, certainly whether it was euphoric or not, those were the circumstances in place in 2020, 2021. That was fair value for those stocks, obviously, at that time. That's why they traded there. Today, the market has changed at a macro level in a pretty meaningful way. And I think the market, it just takes time to adjust and find that sort of new normal equilibrium.

But I do think the starting place was unique given those micro and macro factors we outlined. It doesn't mean they were overvalued. They were just valued for the timeframe we were in. And today, I think we're just trying to find that true equilibrium.

Brook Dane: Yeah. And I would just add that as we've moved through the past five or six months, the change in the underlying interest rate environment has been dramatic. And that really does impact the valuation of

these longer duration assets like Peter mentioned. It's just structurally higher rates cause your long-term terminal values to come in. But at the same time, the fundamentals of many of these companies continue to perform remarkably well. And as fundamental investors, that really what we're focused on. Is instead of looking at tech overall, it's identifying the pockets of the market where we think there's opportunity, where we think the broad consensus is underestimating the impact of earnings growth or some sort of structural change in the business.

So, as we sit here today, we've seen this massive compression in valuations driven by higher rates. And then an undeniably slower macro environment than we would have forecast a year ago. But at the same time, a lot of these businesses continue to perform very well. And we think there's great opportunities out there in different companies.

Allison Nathan: Right. And is that the key here in terms of thinking about how do we discern between companies that have gotten hard hit but actually have very solid fundamentals?

Brook Dane: Maybe not, yeah. And one of the things, you know, Peter earlier was talking about the COVID beneficiaries. And there is definitely a class of stock that pulled demand forward by multiple years and accelerated through the pandemic in ways that were largely unnatural and right place and right time. And great for those businesses. Now, many of those businesses are kind of trying to comp that comp and having a difficult time working through that.

On the other hand, some of the movements in tech architectures and things like that, that the pandemic accelerated are actually really sustainable and we think have real legs underneath them and are likely to continue to drive growth for the coming three to five years.

Peter Callahan: And maybe just a sound byte. I think both the challenge but the opportunity when we think about tech, I think the last number I looked at, there were nearly 200 software companies in the public market today over a billion dollar valuation. That number was 50 ten years ago. So, you know, for investors out there, that's both opportunity and challenge to find the right one. But just to give you a sense of the pervasiveness of technology in the

market today, a lot of really powerful secular drivers that have taken companies into the public domain and creating great opportunities, but obviously, being selective is very important as the macro environment becomes a little bit more difficult.

Brook Dane: Yeah. And that's true across all of tech, right? There's a massive difference between what's happening in an enterprise software company that's doing digital transformation kind of work right now versus a consumer facing internet stock that maybe was benefiting from everyone staying at home because of COVID lockdowns. And so, just discerning which are the winners and the losers in those markets matters a ton. And that's the great part about being a tech investor, right, is every day there are new companies and new situations to look at and to analyze and think through where the opportunities are.

Allison Nathan: But Peter, you are a sector specialist on the trading desk. And you are dealing with clients. You are having to navigate this volatility every day. So, are they discerning? How are they managing this volatility?

Peter Callahan: I think what we've observed on our desk

here at Goldman is the level of sort of derisking our outflows hasn't felt particularly acute to a single investor type. I think all investor types, whether you're mutual fund or you're hedge fund or even if you're retail, I mean, I think everyone is sort of fighting the same battle, so to speak, right now.

And so, we kind of think about the different sleeves of capital that are involved in the marketplace everyday. Right? We look at hedge fund gross balances or gross exposure to the marketplace, as our prime brokerage data set. And our data set would indicate that hedge fund gross exposure is now at or near kind of five year lows. Right? So, a lot of leverage from the hedge fund community has come out of the marketplace over the last six months to one year. And I think that speaks to some of the difficulty that investors have had in stock selection and navigating some of the big changes you've had in the macro backdrop. Brook alluded to sharp changes in interest rates earlier.

So, it does look like the hedge fund community has taken down exposure a fair bit, at least how we look at it, particularly in the long/short manager side. So, that's interesting in terms of one sleeve of capital that has sort of

pulled back risk to kind of wait for a better pitch to hit, if you will.

On the mutual fund side, listen, I think there are always rotations going on. I mean, I think about allocations into tech at a sector this year, right? For the last two years you had very low commodity prices and low rates globally. So, that may have made sectors like energy or financials or rate sensitive parts of the market look unattractive, right? That earnings profile wasn't as robust given lower commodity or rate prices. Whereas tech, you could argue, was maybe over earning or doing its lion's share of the work given all the secular drivers that were at favor and low interest rates that helped our longer duration cash flows. You know, that's reversed.

So, I think at a mutual fund level, you certainly have rotations going on. Potentially money coming out of tech and moving to other pockets of the market.

And obviously, on a flows level, money coming into and out of the equity market, I think there's something like 1.1 trillion dollars of equity inflows over the last year, which is larger than the 20 years prior combined. That came into

the market. That is starting to slowly come out of the market right now.

And if you think about tech taking up such a large percentage of the market cap or the S&P 500, you know, the big five or six stocks accounted for 20 or 25 percent of the index, of course it's going to have its fair impact, but outsized impact on tech. So, outflows are starting to accelerate from the market or pick up, and hedge fund growths coming down would be sort of two indication we see of lower risk right now in tech relative to 12 or 18 months ago.

Allison Nathan: Is anyone buying tech right now?

Brook Dane: We are. So, I've been out doing a lot of work with our clients and talking about the opportunities that this dislocation has created in the marketplace. And we do think that there are real opportunities for clients who have a long enough time horizon to think about the compounding nature of these businesses. So, we are very long-term investors. We think about the businesses we're buying and how they're positioned. But we think the market is giving opportunities for people that can stomach

the near-term volatility over the coming months, that this is going to prove to be a really interesting entry point for some of these businesses.

It all comes down to can you identify the right businesses? Can you find the right teams that are going to execute against the opportunities in front of them? Look, there's potential out there. And you're getting an opportunity right now to buy some assets at prices that we haven't seen for five, six, seven years in terms of the multiples of forward revenues or cash flows.

Allison Nathan: So, are there sectors or industries or a certain type of company that you feel is more compelling? Or is it really just case by case, company by company?

Brook Dane: So, there are three areas of the market right now that we're spending a lot of time looking at. First would be software broadly. Second would be cyber security. And then the third would be semiconductors. And we think that there are real opportunities in each pocket of that market.

So, with software companies, we've talked about the

valuation compression you've seen. But those are businesses that are actually, you have to be investing in software to survive as an enterprise today. If you're not getting closer to your customer, if you're not using data in a more intelligent manner, if you're not staying on top of your employee base, your competitors are and they're going to take the market.

So, I was out last week with Microsoft for a full day of meetings with their management teams. And you know, they completely acknowledged that the macro environment is tougher right now. But they're looking at this as a massive opportunity to take share over the next three to five years as their products offer better, faster, cheaper solutions to many problems.

Likewise in cyber security. You know, it's not a surprise that the threat environment in cyber security has magnified given the war in Europe and everything that's going on, tensions between the US and other international players. But what's underappreciated by the market is that the move to the Cloud is kicking off a whole new cycle of security architectures. And finding the right companies that are going to benefit from that, again, is going to create

really compelling return on prospectives for our clients out there. So, cyber security is an area we're spending a lot of time on.

And then semiconductors is probably one of the most controversial parts of the market. And I'm sure Peter will have opinions around this. But when we step back, the semiconductor industry is trading at a discount to the market multiple implying that there are going to estimate cuts in front of it.

First of all, we think the discount is too high. It's pretty severe today. But then also, the drivers of what's making semiconductors powerful out there is very compelling. So, you think about increased content and things like EVs. You think about powering the Cloud and powering the growth in AI and ML. We just think that there are great opportunities around all of that.

You have to be really specific about the names you own though because there are some semiconductor companies that are on the wrong side of some of these trends. Or that are feeling margin pressure. We think if you can find companies that have the ability to drive up gross margins,

to take share because they won design slots, you can make great returns for your clients. So, those are some areas that we're really excited about and think that there are really opportunities out there in the marketplace.

Allison Nathan: Peter, do you have some views on that or observing client views as well?

Peter Callahan: Yeah. I think Brook hit on a lot of the things that we're hearing out there as well. I mean, certainly, dislocations oftentimes create opportunities for longer-term investors. When you see correlations tighten up like we've seen in the market, everything sells off 7 percent one day, that's probably not the right way for all of those priced stocks to be repriced on any given day. And so, elevated index activity, basket trading, concerns around macro, those do create good opportunities.

And I do think that you go back to sort of software eats the world is sort of the investing paradigm that I think a lot of investors have looked at. And one of the sound bytes that stood out at me for an earnings season that we've just had was the CEO of Microsoft, Satya Nadella, and the CEO of ServiceNow, Bill McDermott, both of them independently

commented that when asked on their earnings calls about the impact of the macro, or potentially slowing macro in Europe and elsewhere on software and spending cycles, they both said that software is deflationary. Right? It's a cost saving tool.

When you implement sort of workflow and automation-based software, you can actually reduce your cost as an enterprise and drive efficiency. And that's a really powerful selling motion against a likely slower macro backdrop in the months and quarters that come.

And so, I think when investors are doing work right now, of course we can debate the P or the multiple for these businesses. A lot of that is corrected. And so, now it's time to roll up your sleeves and get very focused on the E. And if you're confident the market is underappreciated in the E, and particularly, I think, in software which is probably one of the bigger opportunities within tech today, that's probably where you find great returns and great outflow over a longer timeframe.

Brook Dane: The other thing I would just talk about as well is that the E part, or the cash flow part really does

matter. And whereas a year ago a lot of investors were willing to look through the profitability of these companies to say the growth and the market opportunity is so vast, you know, there has been a real shift in attitudes around, you know, the companies do need to be showing [UNINTEL] leverage. They do need to be producing free cash flows. They do need to have a path to creating those cash flows.

That's something we've always believed in in terms of how we look at companies. So, but the market is definitely more focused on what's the earnings or cash flow power of each of these businesses? And when will that be realized?

Allison Nathan: And we've just completed around the tail end of earnings season, Brook. So, were there key takeaways beyond what we've already discussed? What were your key takeaways?

Brook Dane: Yeah, you know, beyond some of the areas that we've already talked about, a couple other points that I would highlight. So, first, things are slowing a little bit out there at the margin. That showed up in a lot of the online advertising companies' businesses where you started to see them talk more cautiously. Now, some of that is still the

ripple effect of the privacy changes. But generically, in slower economic times, you could expect advertising dollars to pull back a little bit. And that's creating some uncertainty, but also some opportunities in that subset of companies. So, you know, that's an area where maybe the macro hasn't been as robust.

Likewise, in the e-commerce verticals, you have seen that retrench pretty materially as consumers have pulled back their spending. So, those are some areas where there's a little bit more incremental caution out there.

But by and large, most of the companies that we're focused on have had actually very good results as we've moved through this earnings season. And forecasts have moved higher across the board for most of the names we care about. But I do think back to this idea that it's not a tech universe that you're looking at, but it is individual stocks and individual companies, the differences really matter at this particular point in time.

Allison Nathan: One area of the market that we haven't touched on that I want to is retail investors. You know, there's this sense that retail investors always buy the dip.

And to go back to my earlier question, so, have they been buying the dip? What role are retail investors playing right now?

Peter Callahan: Yeah, it's a great question. And I guess there are a couple data points I would offer here. Some of the public available data for sort of bigger retail trading houses out there would indicate pre COVID we think the retail participation in the market was maybe somewhere in the neighborhood of, call it, low double digits percent of volume traded in the marketplace. And that number moved as high as mid to high 20s during the peaks of COVID when people were sitting at home. There were stimulus checks. So, sort of the advent of Robin Hood. There was obviously momentum in the marketplace. So, that participation or that P rate in volume really expanded or, frankly, doubled during the depths or pre COVID levels to the peaks of that work from home era that we've had.

That number seems to have sort of settled now around those mid to high teens. So, you know, the activity levels are above where they were pre COVID. Below off the peak off the peak of 2021.

In terms of what they're doing, I mean you are starting to see, at least the best we can imagine, you are starting to see some outflows come out of the market. In the last couple of weeks I talked about 1.1 trillion dollars of equity inflows over the last year. And so, household allocation to equities is still at multi year highs. There are signals that retail dollars are starting to flow back out of the marketplace, kind of for the first time in a little while.

So, the intensity of trading seems to be a little bit lower. Perhaps the direction of flow in or out of the market seems to be ebbing, maybe, back out, albeit at a very, very high base. But there's not a lot of evidence that that story has ended yet. And there's still a vibrant market participant. And the names or the activity levels at a subsector, at a single stock level certainly can change around. But that vibrancy in the market still seems to be there for the most part and is above what we were used to seeing back in 2015 or 2018 before COVID.

Allison Nathan: So, if we just take a step back, we talked about the fact that the macro environment has shifted tremendously. Lots of cyclical factors that are weighing on the sector, maybe unjustly, indiscriminately right now. But

ultimately, if you look at the sector more broadly, structurally, people are talking about a paradigm shift. Is there one? Or are we really just looking at cyclical headwinds now that will eventually retrench?

Brook Dane: So, I would be firmly in the camp of it's cyclical retrenchment that we're seeing right now that's going to reverse as we move across a couple years. Now, we can have a real debate about what we can pay for those future streams of cash flows. But these businesses, by and large, are exceptional. Right? They are producing great profit levels. They have wonderful margin structures. They're growing at well in excess of the broader economy. And you know, they're delivering real value to their customers. So, these are real businesses with real growth opportunities in front of them.

And then it comes down to a matter of have numbers reset to the point where investors can get comfortable with the trajectory of nearer-term revenues and cash flows? And are the valuations more compelling?

So, from where we sit and what we're looking at, it does still feel like there's tremendous opportunity and prospects

in front of this sector as a whole.

Peter Callahan: Yeah, and maybe from a more tactical lens on my side, I agree with Brook. I think brighter days are ahead for the tech sector. Of course, navigating any short term or greater volatility is kind of a hard one to call.

Brook Dane: Uh-huh.

Peter Callahan: But when you kind of think about 2023 and beyond, right, those mega themes like Cloud and e-commerce, digital payments, those are all very intact. Automation. Things like that. And also if you think about sort of tech sector, right, energy is going to grow earnings rapidly this year. Double digits. Next year, we're forecasting energy earnings to decline. Whereas tech is going to accelerate next year. So, I think a lot of the headwinds that the sector is facing this year, whether it's interest rates, positioning, a starting place on valuation, opportunity costs or other sectors in the market, they may look attractive. A lot of that starts to reverse out into next year.

And obviously, with equities being forward looking instruments, the market might start to sniff that out in the

coming months. So, I think brighter days are ahead for this tech sector. We've certainly seen a healthy amount of derisking already. We've seen a large drawdown that at least in the growthiest pockets of tech rivals what we saw in the 2000 era.

And finally, you are starting to see some soft signals that companies are tightening the belt. You're seeing headlines about a pullback in spending, slowing down hiring. So, these companies sort of get the message. They understand that the macro environment's changing and they need to be attuned with that.

And so, I think those are all sort of healthy signals that, sure, there may be near-term volatility, but it does feel like brighter days are ahead for this sector.

Allison Nathan: So, what are you both watching that would indicate to you that we are going to be at a turning point?

Brook Dane: So, from my perspective, we're never going to be able to call the absolute bottom or the absolute top in a market. So, what we're really focused on are with every

company we own there's a couple critical variables that are going to determine whether they're going to drive their business forward at the rates that we think they are. So, it's really that company fundamental. Are they meeting their revenue goals? Are they driving customer adoption at the level we expect? Are the margins still as good as we think they are? So, it's all those micro data points that we're really looking for and really trying to get confirmation of because that's what, ultimately, is going to determine what these companies are worth and whether they're going to go up a lot in the stock market over the coming years.

Peter Callahan: And I'll give an answer that, I don't know if anyone will have an answer to, but inflation, right? I think if inflation starts to come down, all of the sudden our sector relative to what you're seeing in rates backdrop starts to feel a lot healthier, right? A slow economic growth backdrop with falling inflation and manageable rates, we're okay with that. We can navigate that pretty well as either tech investors or tech followers like myself. So, you know, that's the one thing I'd love to watch at a macro level. That's a tough thing to call.

And so, if you want sort of more micro clues, Brook

obviously hit on a lot of the stuff. We're watching other soft signals, right? Changes in management tone just to sort of adapt to the times, right? Valuations and positioning starting to come down. Sentiment capitulation, right? When everyone decides that something is uninvestable, that's probably exactly when you want to invest in it, right?

Brook Dane: Always.

Peter Callahan: And so, all these little signals start to add up. And in the absence of a big inflation signal telling us it's on its way down, those are the things that we're going to watch in the interim.

Brook Dane: The other risk that I think we're paying attention to too is the issue around regulation, and especially for the larger tech platforms. You know, that's been a little bit on the back burner as some of the other headline risks have crept up. But regulation risk is always a big one for this sector. As well as just geopolitical tensions. Those obviously play in.

But again, you know, everything we're seeing, the businesses are still performing at a very high level.

Allison Nathan: Brook, Peter, thank you so much for joining us and sharing your insights on this really volatile sector right now that so many people are focused on.

Brook Dane: Thanks, Allison.

Peter Callahan: Thanks for having us.

Allison Nathan: Thanks so much for joining us this today, May 17th, 2022 for another episode of Exchanges at Goldman Sachs.

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