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EPISODE 12:

Running Towards Adversity

with Mark Steed, CIO of Arizona PSPRS

Robert Morier: Welcome to the Dakota Live! Podcast. I'm your host, Robert Morier. The goal of this podcast is to help you better know the people behind investment decisions. We introduce you to chief investment officers, manager research professionals, sales leaders, and other important players in the industry who will help you sell in between the lines and better understand the investment sales ecosystem. If you're not familiar with Dakota and their Dakota Live! content, please check out dakota.com to learn more about their services. Before we get started, I need to read a brief disclosure. This content is provided for informational purposes and should not be relied upon as recommendations or advice about investing in securities. All investments involve risk and may lose money. Dakota does not guarantee the accuracy of any of the information provided by the speaker, who is not affiliated with Dakota. Not a solicitation, testimonial, or an endorsement by Dakota or its affiliates. Nothing herein is intended to indicate approval, support, or a recommendation of the investment advisor or its supervised persons by Dakota. Today's episode is brought to you by Dakota Cocktails. Are you looking to expand your network and connect with other professionals in the investment industry? Look no further than Dakota Cocktails, the premiere networking event series for sales professionals, allocators, and more. Our ongoing series of events takes place in cities across the country, providing you with the opportunity to connect with like-minded individuals and build meaningful relationships. At Dakota Cocktails, you'll enjoy delicious drinks, great conversation, and the chance to connect with industry leaders. Whether you're looking to make new contacts, explore potential partnerships, or simply learn from others in the industry, our events are the perfect place to do it. Join us at Dakota Cocktails and discover the power of meaningful connections. Visit our website at dakota.com/cocktails to learn more and find an event near you.

Robert Morier: Yeah, thanks for being here. It's nice to see you again.

Dakota: Number two. Had a lot of fun on the last one.

Robert Morier: Good. I was a little worried you might not come back, but you did.

Dakota: Any time we can sit and speak to somebody and learn something, I'll be here.

Robert Morier: Good. Well, I'm happy to hear it. Well, I was thinking about you. I went to see Greg Isakov last night at Union Transfer, and I think that was one of your stomping grounds—

Dakota: Union Transfer, The Fillmore, and World Cafe Live. No other city's got three rooms like that for music. So good. It's always a great—

Robert Morier: We should start enticing our guests to come to Philadelphia, so we can get them into some of these live venues.

Dakota: COVID's done that. I mean, COVID's widened the boundaries of the ability to communicate and hang out. So, we've done that with a lot of folks. And whether it's out and about or seeing a show or golf, etc., but that's the beauty of COVID. It's been a lot more familiar type of communication, getting together. So no, fun. Good. The Old Spaghetti works. Union Transfer is the Old Spaghetti Works.

Robert Morier: Yeah, that's right. Well, he's a good songwriter. He's got some lyrics that said, "were we somewhere in between?" And when I think about these markets over the past few months, it feels like that's where we've been. Somewhere in between. Somewhere in between recession and something else. So how have your client partners approached this operating environment as they continue to navigate these market conditions to this somewhere in between?

Dakota: There's a lot of alternative allocations. I mean, traditionally I'm speaking to Mark, and he'll talk about the classic institutional investing alternatives. But now you're seeing more fragmented wealth and intermediaries, whether it's a bank trust department, whether it's an RIA, a family office, a multifamily office, an insurance company with a little bit more of a retail focus. Everybody's trying to figure out, how do I invest directly into the economy and get a yield or get some sort of co-investment? I mean, active management, still tremendously concentrated managers on the traditional side. But just this whole 40% or whether that's going to be 40 or 50% fixed incomes drifting into having an alternative focus to it, and people are really interested in finding out ideas. So, when you have an institutional allocator like a Mark, he'll be speaking a language that a lot of these wealth intermediaries are speaking as well. It's just really finding the right strategy. The momentum started a few years ago. It's not stopped.

Robert Morier: Yeah, I'm interested to hear those ideas. So, we're looking forward to it. Well, I'm also excited to introduce you to our guest, Mark, in a few minutes. But before we do, I am happy to share we have a number of students today with us from Drexel University listening in on the Dakota Live! Podcast. I teach two courses on venture. Venture capital, venture investing, and early-stage venture financing, with the close school of entrepreneurship. And I have a few questions from students that they gave me in advance, so I'm probably going to try to slide those in at some point, Mark, just as an early heads-up. But I'm thrilled to have the students with us here today as listeners, as I'm sure they're thrilled not to be in class today.

Dakota: Well, Drexel's a great university. And hopefully there's a tuition rebate because they have to spend a few minutes listening to me. Oh well. Boy, I thought college was going to be hard.

Robert Morier: I think your extra credit, Chris, I wouldn't worry about it.

Dakota: I don't know about that.

Robert Morier: I know Mark certainly is. Well, with that said, I am very happy to introduce our audience to Mark Steed, Chief Investment Officer of the Arizona Public Safety Personnel Retirement System. Mark, welcome to the show.

Mark Steed: Yeah, thanks for having me. Looking forward to it.

Robert Morier: Yeah, we are as well. We're grateful for you to take some time to speak with us. As Chris had mentioned, we're excited to hear your ideas. I know it's been a very busy few years for you as you've taken over as the CIO at Arizona. And we're going to get into that in a few minutes. But before we do, I want to quickly share your background with our audience and students. So, Mark began his career for PSPRS as a portfolio analyst in 2007, starting as an intern. During his ensuing rise through the ranks, Mark has managed each of the PSPRS portfolio assets, including private equity, venture capital, fixed income absolute return, private credit, and global trading strategies. In 2019, Mark was promoted to Chief Investment Officer. The Arizona Public Safety Personnel Retirement System, provides a uniform, consistent, and equitable statewide retirement program for Arizona's public safety personnel. PSPRS provides retirement benefits and programs to nearly 60,000 active members, retired members, and surviving beneficiaries, and to more than 300 employer groups. Mark has been named by Money Market Intelligence as one of the US public pension sector's rising stars. He's played an instrumental role in transforming the plan's $17 billion in investments from a traditional stock-heavy portfolio to a modern, highly diversified set of investments, built to withstand market volatility while delivering significant returns. Mark holds a Master's of Science degree in Predictive Analytics from Northwestern University and an MBA from the Arizona State University's Thunderbird School of Global Management. He earned his bachelor's degree from BYU, where he majored in Latin American Studies with a minor in Business Management. We're going to speak, Mark, to you in more detail about predictive and behavioral analytics. We're excited about that. But I want to highlight your experience in a four-year project as a forecaster for the Good Judgment Project, led by behavioral economist Phil Tetlock, who was part of the University of Pennsylvania here in Philadelphia. We can't wait to learn more about how you've carried that experience through your career. So, we're excited to have you here. Congratulations on all your success.

Mark Steed: Yeah, thanks so much. And preemptive apology, I've got remodeling going on at my house. And I think that the point was brought up earlier that COVID has just brought humanity back to the business. I'm in a spare room. I always feel bad because you expect there to be something stimulating in the background. There is not. There's a door.

Robert Morier: So, I was listening to a wonderful podcast you did with Aoifinn Devitt, CIO of Moneta Group, called the Fiftyfaces Podcast. It's really a wonderful investment podcast, if you get a chance to listen to it. And I really enjoyed it because you ended that show talking about your time as a younger person, and we've got a lot of younger people on the call today, in ensemble choir. And you gave this great story about how you were part of this choir, and you guys were singing your song and a cell phone went off in the audience. And it slowly threw the entire ensemble choir off key. And before they knew it, the whole choir sounded like a cell phone. And I couldn't help but draw another parallel to the financial services market, that it's a noisy world out there. And how do you ignore cell phones ringing in the background, construction downstairs or upstairs, and keep that choir on key? Mark, especially as a CIO from a management perspective, how do you shake out the noise?

Mark Steed: Yeah, it's a good question. But I think that's what I love about music. It can look so subjective, but there really are notes and melodies, right, that are just objectively more pleasing to the ear. So, in other words, there is a system or a machine, if you like, lurking in music. And I found, actually, that in most forms in life, including financial markets, there's a machine. And if you figure out how the machine works, you can separate the signal from the noise. So, I think somebody who teaches venture, where does innovation fit in, right? So, if we're like machines, what are we talking about here, right? So, I'm not talking about Newtonian mechanics, right. Clockwork, right. We're talking about biological systems that adapt. But even though these systems are adaptive, and they learn, there still are rules. And so, I think it's all about learning the rules of what's really going on here. We've got different markets and different strategies. What's really at work? And I think that's it's all about. And so, we spent a lot of time trying to pull apart the machine. I think Ray Dalio of Bridgewater really coined that term, and we take that to heart. And I'm sure at Drexel Engineering School, that's something that might resonate, too.

Robert Morier: Yeah, absolutely. Well, for those Drexel students who are listening in today, it's wonderful to know you started with Arizona as an intern. Dakota is in the business of keeping track of where people come and go in our industry, as part of the services that are offered on marketplace. But you're one of the increasingly rare people who have had longevity with one employer. So, could you share why the plan has held your attention for all these years? And what about the role keeps your fire burning?

Mark Steed: Yeah. So, I think a lot of things in life is an accident, and you just keep rolling with it. I ended up at Arizona because… so I have three children, three boys. My eldest is 20, also at university. And my two oldest boys have hemophilia, so that means their blood doesn't clot. But 20 years ago, when he was born, the health insurance landscape was a lot different. And there were only so many employers that would actually not require me to pay 20% of the co-pay for his medication, which would cost a million bucks a year. So, I was going to pay 200,000. So, there are very few jobs. My first question when I was interviewing out of business school was, can I see your insurance policy? And they're like, just talk to HR. And I'm like, no, not that person. I need someone up to chain. So, it was really random how I ended up there. I was working at JPMorgan Chase before when I didn't have kids, right. So, coming out of business school, I took the job as an intern with my current employer. And I always thought I took the job, honestly, because they covered the health insurance for my kids, and it was going to have to pay 20% of the co-pay. I remember the CIO at the time saying one time when I was frustrated, he's like, hey, do you feel tortured? You're here because you had to take this job for your kids? I was like, yeah, that's exactly why I'm here, right. I'm tremendously honest about it. That's why I took the job, not why I stayed. So, I always figured that I'd stay for the five years and then do something new. But when I started, I was building the private equity and venture portfolio. So, they were 100% stocks and bonds, right. I guess in life I figured out, you can either get in the starting lineup of a lower league team, or you can sit on the bench of a more elite team, right. I wanted at bats. And Arizona Public Safety is going to give you a lot of at bats. And so, I just took that. So, I started with private equity and venture, and then I was rotated over into credit. And I know there's maybe a question lurking later about just asset class rotation, right. But I found as long as you stay somewhere and you continue to grow as a professional, so you're not doing the same thing for 10 or 15 years, right. You might as well just stay there. And I never thought I would, but eventually you build a track record. And many people admire that track record. Even people that are coming in, because we're governed by a board of trustees that are prejudiced not to like you if things aren't going well, have to take a step back and say, that's credible. And so, I always just found a home. Then eventually you look at the whole portfolio and it feels like a child after a while, right. There's so much of you manifested in different parts of it, that I just stuck around. And I'm still surprised. It is a dream job. You pinch yourself every day. It's incredible.

Robert Morier: That's a wonderful to hear. I appreciate you sharing all that and sharing that information about your family. Benefits are something I think we all take for granted. And you're in the business of being responsible for a lot of pension obligations. So, it's nice to hear that personal side of it. So, thanks for sharing.

Dakota: Mark, on the personal side, in terms of hemophilia, there's been some medical developments, right. I mean, was it the old factor VIII from Baxter, or a lot of these clotting to pig plasma and things like that.

Mark Steed: I'm impressed. Yeah.

Dakota: I know a friend who was working in the pig plasma type of product. And friends at Baxter. I spent some time in Chicago. But from when your children are born and now 20, it's like the Steve Jobs statement. I'm going to be the first to outrun this or the last to succumb to it. So, have you seen medical developments on behalf of the efficacy for your children?

Mark Steed: Yeah. So, what's funny about that is there have been tremendous developments when my kids were born. So, anyone who's our age to the extent they're still alive that has hemophilia, usually has HIV or hepatitis C because up until I think '85 to '86, right, they were doing blood transfusions, right. Then you had the whole tainted blood and the Ryan White story and all of that. So that's really humbling. There aren't a lot of people in their 50s and 60s and 70s that made it through OK. And so, when my kids were born, we had to infuse them in a vein three times a week. And that's always really unnerving as a parent, right. You're trying to do the school thing. Kids wake up. They don't have very good veins. You're trying to stick 'em. Nobody likes shots, generally, but it's even worse when you're trying to find a vein. And sometimes we have to stick kids two or three times, right. And so fast forward because the medication, as you said, they took factor VIII. So, think of the clotting cascade as a relay race and they're missing one of the people in the relay race. And because you're missing one person, right, then their blood doesn't clot at all. So, we have to infuse them three times a week. And that medication had a half-life, right. So that's why you had to do it. So, the plays since then have been extending the half-life of the medication. But there's also been some genetic therapies that other groups are working on. In fact, I think BioMarin had one that was expected to be out a year or two ago, but I think might be out later this year. I'll tell you what's interesting about that in my job is, when BioMarin was presenting the original announcement that they anticipated, I think back in 2019, that the genetic therapy would be released, effectively curing your kids. I'm getting emotional as a parent, right. My kids are like, wait. They're like, hang on. We may be cured, right? That never occurred to anyone. And it was the weekend before I interviewed for the CIO job at Arizona. It was a final interview, and I was up against two other sitting CIOs, right. And I walk in and I'm like, I don't care if I get the job or not. My kids are going to be cured. And it's probably the best interview I ever had because I could have cared less. So long answer to your question, but yes. There's been some tremendous advancements.

Dakota: No, we live in a country where people can criticize our country, whatever, and there's great things and bad things. But the great things are what you just talked about. The developments in medicine and the brainpower and everything like that. And it's just obviously when you're in the dead center… David Quinn is the coach of the San Jose Sharks is a hemophiliac. And he had to suspend his hockey career because… I played some golf with David over the years and around some friends that knew him really well from Boston University. And he'd lace up his skates and start bleeding. He's a first-round draft pick in the NHL and had to give up his career. So, it's nice to hear that there's progress being made.

Mark Steed: Yeah, it's not all doom and gloom out there in the world. A lot of positivity.

Dakota: And let's focus on it.

Robert Morier: I agree. Well, these are the days I wish this podcast was two hours and not 40 minutes.

Dakota: This is the important stuff, developing relationships with people. This is all that matters and then the other stuff happens.

Robert Morier: No, I couldn't agree more. I'm glad that we're having this conversation. And Mark, we really do appreciate you sharing all that. I think a lot of people in our audience will as well.

Dakota: Absolutely. Wonderful humility.

Robert Morier: Well, getting back to the seat that you're sitting in from a CIO perspective, I really admire the fact that you've taken an innovative and relatively disruptive approach to how you've tackled the challenges of the plan. So, when you took over as the CIO, I know you were faced with a myriad of challenges that were quite well documented. How did you strategically map out how you wanted to implement the changes that you saw that were going to be necessary to effectively right the ship?

Mark Steed: Yeah, and when you say well documented, yeah, you're not kidding. Just as an interesting side note I think for listeners, I would cautious anyone to be suspicious of any claim, really, a reporter makes about government employees. Because public employees, little known fact, in public agencies are not covered by slander and libel laws, right. So, reporters can say pretty much anything they want, unless they actively knowingly say something that was wrong. So, the bar is really high. But so, the reputable groups like the large players out there that some of us will read, they'll thoroughly vet stories. And they'll actually attribute stories, see names. But yeah, anyway. As an aside, I think that's just one of the interesting learnings, is to be very suspicious of that because the bar is much lower for reporting on public agencies. Anyway, as you can imagine, stepping in 2019 effectively as a CIO had the… I think we're waiting for some new trustees to show up. I'm governed by a board of trustees. And I think there were some that were rolling off and some that were coming on. So obviously there's low-hanging fruit, right. And I know there are students listening, so I'll try to give some examples that might be a little more palpable for them and just not talk in vagaries. But things just weren't working. Routine meetings that you would think happen every Monday were not happening on Mondays, right. The obvious stuff. Just regular logistical meetings weren't being held. Everything was on spreadsheets. It was very analog. Underwriting processes were pretty inconsistent. And keep in mind, right, that we're investors and we do a lot of onsite visits. And we see different processes and systems and cultures. So, I like to think a good investor has a pretty sensitive BS meter. And so that's the lens, right, that I have. And I always ask myself, what would happen if we had an external investor come in and start asking questions, right? And then it was just classic, what is easy and cheap, right, versus expensive and hard? So, you start with investment policies and asset allocation. That's cheap and then that's the former. And then you had systems that we needed and processes and people, and those took longer. And some of that stuff we're still working on, but that's how it started.

Robert Morier: I read somewhere that you said, we basically took a scalpel to the actuarial model. You wanted to equate portfolio volatility to the contribution rate volatility. So, for those public pension allocators listening to the episode and thinking about their own plans, what lesson did you learn through that exercise that you share with your peers?

Mark Steed: So, one of the things I think that's important is, so imagine walking in. We have an investor walk in and the first question is, what do you invest in? And then why, right? In other words, right, for the sophisticated investors that are listening, right, you know your portfolio is a function of your risk appetite. But people assume that pensions are all the same risk, right, and your portfolio should look the same way. So, one of the most difficult questions to answer. If you want to see an investment team squirm a little bit, right, is asking why is the risk that you're running, the risk that you're running, right? If we define it as standard deviation, which a lot of us like to do, it's like, well, let's say it's 15%. Why is it 15%, right? And so, when I say it starts at the top, that really was the initial question. And so, there's the impact for people and businesses that I'm getting around to the question here, a different direction. For people in businesses, you had incoming impact of decisions, right, the income statement impact, expenses, and revenue, right. And then you have balance sheet or wealth considerations, right. I mean, does it impact my income today and does affect my wealth? So obviously, when returns fall short of expectation, so actuaries will make assumptions about return expectations of ours is 7.2%, but some groups have 6 and 1/2. Some group might be a 7 and 1/2, but generally somewhere in that range. We fall short. Someone has to make up the difference. And that's usually the participants, and their contribution rates have to go up. So that's an income statement problem, right. And then you have the balance sheet problem. So, we figured out, what happens if you run with a portfolio that has 15% volatility, and you crunch it through the actuarial process? How does that actually impact the contribution rates of our members because you can't just keep raising them to the sky, we figured, right. Everyone has a limit, right. The people that pay in are police officers and firefighters, and the cities and towns. The employers. So, they don't have unlimited resources. And actually, what we figured out was, because this is what's really true about pensions, they'll smooth your returns, right, because they'll want to smooth contribution rate volatility. So, they'll smooth the return over some period of five, seven, 10 years. Meaning, they'll assume you'll make whatever, 7.2%. And then the spread above or below that, they'll give you, if you have a 10-year smooth rate, 1/10 of that and you'll book 1/10 this year. And then 1/10 for the next nine years right after that. We figured out, once you do that and then if there is a liability that's created, you amortize that liability out over some period of time. It depends on the pension, but it could be 15 or 20 or 30 years. That standard deviation of say a 15% portfolio really translated into a 1% standard deviation or lower for contribution rate. So, the takeaway was, actually, risk is not our problem. And I don't think it's a problem for most pension funds. You could actually assume a lot more risk in the portfolio. And everybody was running around worried about the endowment model and being balanced because of what happened in '08/9. Everyone was in stocks. But even if you're super risky in stocks and you crunch it through the model, what we discovered was, actually, the impact on contribution rates isn't actually that high. Your focus should not be on the investment program, one, if you're a constituent. That's one takeaway. But for us it was, we can embrace risk. And risk is one of those words that I think gets misused a lot, but that was one of the big takeaways we had.

Dakota: And Mark, how much goes out a year in terms of payments to pension years?

Mark Steed: It's a good question. We're probably close to about a billion a year.

Dakota: Wow, that's unbelievable. I mean, basically, what? 5 and 1/2% of the portfolio?

Mark Steed: Yeah.

Dakota: So, there's your bogey. That 5 and 1/2, 6% range that we always talk about with endowments and foundations. So, it's funny how that math works. Now, you said here $17 billion. Us as sales professionals that are trying to market interesting asset classes to CIOs like yourself, I mean, you're not in front of your Bloomberg all day, every day looking for ideas. So, this is almost an aircraft carrier.
Short of chaos and distress, and I know obviously the most chaotic time in the last two years, it was about a three-week blip before the government got involved. What

drives you to decide of an exposure that could really move the needle on the portfolio? And then probably the first question I should ask, with a backup in rates that we've seen with discounted liabilities probably being less and less, are you closer to a more comfortable funding status to the point where you can just immunize the whole portfolio?

Mark Steed: We're not close. When I started as CIO, we were about 45% funded. So, we were one of the lower. Now we're about 60, I might say mid 60s. And I'm averaging because we're I think the only or one of the only pension funds in America where we're actually the sum of 250 individual pension funds. So, all the cities and towns actually have their own system. So, I live in Gilbert. Gilbert could be 80% funded, right, but Phoenix could be 50% funded. You've got Scottsdale that could be 110% funded. So, all the purchase of the asset allocation, right, they all get pooled together. But interestingly enough, I think our consultant surmised, and I think he's right, at the end of last fiscal year, which would have ended June 30, 2022. I think we're the only pension plan in America whose assets went up. And they went up in value even though our portfolio was pretty flat, slightly negative, which was a good return for us, right, relative to the average. It was probably down 10%. It went up because the cities and towns decided that they were smart to finance at 2 or 3% and then pay off their unfunded liabilities. So even though we're paying out, we've actually been cash flow positive. And that's been a huge boon for our program, right, for the last two/three years. So, our assets are actually up to about 18.6 billion as of, I think, maybe last week. So that's where we're at from just a macro position. The question about selecting investments, I think fundamentally, at the expense of being really vague here, the question we're asking is, why do we need this, right? Keeping in mind that we have existing investments. But the portfolio is funded, setting aside cash for a second, right. We've got investments all over the place in companies and in funds, right. So, what's the point in adding the thing or are we adding this and taking something out, right? Is it increase in return? One thing I'll note, though, is this issue of diversification. So, I think diversification is a bit of a dangerous word because it becomes, I found, just practically an excuse not to make decisions about something specific. But recall what I said about risk and how the pensions can take on more risk and can assume, OK, so basically, there's a multi-stage process. So, we will diversify if it doesn't come at the expense of return. So, you have two things that are completely separate but volatile, right. That's great. If you can add something to the portfolio that's diversifying but has theoretically no correlation, right, to anything else in the portfolio, which we all know is really hard to find, right. Then that's nirvana. But what we're not interested in is saying, look, the goal for, take private equity, right. And let's just say just for sake of argument that your return expectation for private equity is 15%. And you've got this group over here that you think might get you 12 to 13 or 14%, but they're a safe pair of hands. That's a discussion where in the past our group and other groups might say, well, they're diversifying or look, there's loss rates.

So, you start coming up with these arguments, right. But there's no reason to diversify. Again, we can assume because we've done the foundational work, we don't need to diversify the risk out of the portfolio. If the risk-free rate is 4 and 1/2% and we have to hit 7, right, or you want us to beat our peers, we're going to have to deviate and do something different. We're going to have to take some risk. I skirted around the process question. You can assume there's a multi-stage process but really what we're trying to do, I referenced the machine, and these themes keep coming back. And we're just trying to understand how the investment works, right. And really it is, whether it's a business or a fund, right, a single stock or a fund or whatever it is, can you explain it to a high school student or a college student? And maybe not that basic, right, but you get my point. If it's a fund or a manager, we're effectively outsourcing. Just for the students that are listening, it's outsourcing part of the management, right. We're going to ask for a lot of data, right, about their deals. We're going to ask about revenue at current levels and the most recent quarter. We're going to talk about EBITDA at acquisition and at the most recent quarter. We're going to ask about debt and LTVs, and we're going to compare those to see what, if anything, is special about performance. Back to the signal and the noise question. So, for example, 5% EBITDA growth in one company might sound good but not if the peers did 8%. And the other way around, 8% might sound amazing but not if you knew the range in the industry was anywhere from -5% EBITDA growth to plus 20, right. Then it's like, OK. Median was 5 to 8. That's OK, right. And we also have a consultant because we have a lay board who will look over our shoulder. Sometimes they'll be in front of us because they had a client. Maybe they'd ask them to do some work on a theme or a manger or a fund. And then we'll take their work and supplement what they've done. But that's basically how the process works.

Robert Morier: Another interesting attribute of your process which is differentiated from some of your peers is that I understand your staff rotates asset classes. That you've got Jacks and Janes of all trades, rather than masters of one asset class. Can you talk about why you've taken that generalist approach? I think it's an interesting one. And I think for our audience, we'd love to hear how that's been going.

Mark Steed: Yeah, and that was a tough one because the first time I was rotated out from private equity and venture into fixed income and credit, everyone in the market assumed that I had done something wrong. And that I'd screwed the job up.

Dakota: Banished to fixed income. Roll the T-bill portfolio.

Mark Steed: Yeah, exactly. So, you're like, no, I didn't do anything wrong. It's fine. But that's really hard to do because I think from a learning standpoint, it's important, but you also don't want team members getting really close to investments, right. And I think it's good just risk diversification for the pension fund, but it's also really hard.

You worry about how you present the fund to outside parties. And if you have a guy that was just doing private equity, venture sitting in a meeting about structured credit, who obviously doesn't know what he's talking about, that doesn't reflect very well in the organization. But as we did it, I think we started doing it in 2011, I think, I've seen the benefits of it. And I think it's worth the risk. And so frankly, we all know that the markets are related. And we look at the world through the four major markets, right. Equities, fixed income, currencies, and commodities, right. But some investments can have the same risks. Meaning, the same statistical distribution, right, in terms of just how volatile they are. Well, how do you optimize returns or even know that their distributions are statistically the same or the risks are the same, if you marooned somebody for their whole life in fixed income or equities? So, while we're always going to keep a certain amount, right, per our investment policies and all of the asset classes, we do have ranges to move. And we just think the generalist model is the best way, and consolidating asset classes so that you have to create an excuse to add something, as opposed to why not add it, is the best way to optimize that discussion, right. You've got credit markets that it will give you intel. Equity markets will give you intel. Currencies will give you intel. And I just think it's really impossible to do that if you don't have more than one person in the room that knows what's going on.

Robert Morier: That's interesting. So, what are some of the consistent metrics then in that case that go across asset classes? So, as you think about, or I should say asset allocation. So, as you think about, say for example, predictive analytics, how does that play into your team's approach and management style? So, thinking about how you're managing your team and what you are asking them to review, look at on a daily basis, that goes into to the underlying goals of their research process?

Mark Steed: Yeah. So, I think at the expense of oversimplifying, so predictive analytics, I think, is a term that a lot of us are just getting sick of hearing it. I think, frankly, right. We hear all the time. We're big data. And it's not very revealing in terms of what we're doing. If you say that you're doing predictive analytics or like me if you have a degree in predictive analytics, right, there's a lot of different things you can do with it. It's like telling somebody that you invest in mutual funds, right. OK, well that doesn't tell me anything. What kinds of mutual funds? And so there are lots of different applications. But fundamentally you're trying to put guardrails around certain claims. If you're a portfolio manager and you're championing an idea, you're basically either saying that this thing is going to keep doing what it's been doing on an absolute or relative basis, right. It's going to keep earning x%, or it's going to keep outperforming its peer group or whatever. So, you're either saying that or you're saying it's going to do that. It's going to do something that it hasn't done historically ever, right. It's going to deliver a return on an absolute relative basis. So those are fundamentally the only two kinds of arguments you can make. And in order to support those arguments, you're going to use data or intuition. And both of those are fine, right. But we need to all agree on the rules of the road. If someone said, hey Mark, given all that, what would you look at for investment metrics? There are some things that we think are pretty high. It would have really high coefficients in any regression model that you make. And one of them is how much personal money? If we're talking to a fund, right, or manager, how much of their personal liquid net worth is invested that's huge? You don't want people experimenting with your money. So, I'd say how much of their personal money, legitimately, is invested in this? And we're not talking about fee offsets. What's coming out of pocket, right? How many deals have been realized, right, because if absent realizations, you basically just have a science project. Which is, again, that's the venture space to some extent, right, if you're an entrepreneur. So that's a different analysis. And then it's references, right. Those things have very high correlations on whether investments will turn out. But what we do with predictive analytics is we say, look, you can't model everything, right. You need data to use predictive analytics. Sometimes we don't have data, right. Sometimes you don't have a lot. It's very ambiguous, right. So, we do a few things that I learned from the Good Judgment Project, right, that were really important for me my formative years, which was, all right, let's get really clear about how we're defining success. And how we argue for ideas, right. Again, are you going to use stats? And if we're using stats, let's be clear about how confident we can be in the numbers that we do have. And we're going to use intuition. So, let's clearly define success and be very specific. Meaning, this is going to outperform the Russell 3,000 by 5%. You have to provide a time frame in the next six months. And you have to say how confident you are that will happen. 60% confident. And then we track everybody because what we want to do is just get to truth, right. And so, we'll take a portfolio manager or an analyst and say, and just look at all the decisions for which you are 60 or 70% confident. Were you 60 or 70%, right? And that keeps everybody honest. That scoring, that social vindication looms large. We find that everybody's overconfident at the start, usually. But then eventually they calibrate really quickly. But we found that that's the way to de-bias the conversation. And that also de-biases people that are allergic to model-based thinking, right. There's always a guy on a team that's the quant, right. He's run the model and he says, yeah, it is and I'm whatever, 65% confident. And then you've got the guy or the woman who's going to sit back and say, yeah, look, I don't need the models to tell me what I know here. I'm 70% confident the other way. Well, we're keeping score. You get to see which one's more accurate. So, it also allows, it provides room and space for different approaches to problem solving, if we want to get to truth. It also elevates voices of people in the room because after a while, you start to look at scores. And it's like, this person is not going to take up a lot of room in a conversation, right. They're not the alpha male. They might be younger, right. But if you want to get to truth, we found the only way to do that is to really just be accountable. So, we're very specific about the metrics that matter, and then we hold each other accountable. And then we just have various models that help us do that.

Robert Morier: That's interesting. Sounds like a lot of character science embedded in there.

Mark Steed: Yeah, a little bit. Yeah, that's a great term.

Robert Morier: I know just reading some of your own work that you've been doing, you've described yourself as an investment ideas person. So, whether that's a new investment idea or a new approach to an old problem, can you share for us some of the more recent investment ideas that have been floating around with you and your colleagues? What's been on your plates? And could you expand that on what types of new approaches you're taking to those old problems? I think it's such an interesting, almost like a barbell. You've got the new ideas on one side, but you've got these old approaches that need new methodologies on the other.

Mark Steed: Yeah, so I love this question. By the way, I think the listeners should know that Rob sent over a list of like, hey, we're going to go down this path. We talked about it, right. And I told him, I said these were some of the best questions I've ever been asked. And they kept me up last night. I was just sitting there mulling. Like, hey, how do I respond to these? And that's a really good question. So let me just address the new ideas quickly. We're both top down and bottom up. So sometimes we'll have top-down research. And one example of that would be, when an analyst of ours was interested in cremation space, right. I think it's up and coming. It's certainly very cheap. Do some research into it. And I said, yeah, sure. Go for it, right. And this is really common. Analyst goes away. Does some research. Comes back. Talk about it with some questions. Then we try to figure out to the extent we're constructive, let's say that we are, right, then where do we get it? And importantly, we will look at public markets and private markets because there's no reason for us to lock up capital if we don't have to. So, we're always looking at part of the builds and the process, back to the prior question is, what are the public comps for the strategy or are the private comps, right? And is there a publicly traded company, right, that's got exposure? And because it's so small, probably not. And who on the private side, right? And couldn't really find anybody. But then we had a deal come to us that had to do with funeral homes. And because we'd already done the research, it was a co-investment from a GP of ours, we were right on the spot. So sometimes we are top down. Sometimes it results in an idea. And I think right now from the top-down angle, we were pretty constructive on anything that was denominated in a foreign currency relative to the dollar. So, the dollar had been at just historic levels. And when I say historic levels, going back to predictive analytics and being precise and accountable, what we do is we have a dashboard and we just say, look, one standard deviation, two standard deviations, three standard deviations. And if it's within one standard deviation, it's within its central tendency. We're not too interested. Two or three standard deviations, and it will come up on our dashboard because we're following the four major markets of equities, fixed income, commodities, and currencies. And we're following mutual funds, ETFs, and single names in the major indices in each of those markets, right. So, it pops up on a dashboard. Then everyone's looking at it, right. And then it's like, well, what's going on here? So there have been a few of those, right. So, we're very constructive on anything that was foreign currency related because the dollar was at such historic levels relative to all major currencies. And that one's probably run its course for about three or four weeks now, so some of that valuation's come back. We've been very constructive on biotech, longer term but publicly traded biotech. The China reopening strategy would probably be another one, top down, that we've been really constructive on. But there were also bottoms up. So, we work with our GPs. And this gets to, I think, one of your other questions, which is one of the solutions we had to, an old problem, was co-investing. So, we've been very active co-investors, which was also mentioned at the start, which is a great comment. And the problem is you get co-investors from all your GPs, and some of them are $2 million, some of them are $50 million. And just as a team, you're trying to figure out, well, how do we handle these? Because on the one hand, if you have a $2 million, a $5 million co-investment, if you did 10 of those, right, then effectively you have recreated a private equity fund with 10 positions and better economics. Because you're typically charged either no fee or carry or discounted fee. But you don't have the bandwidth to process $5 million allocations. First, they're just not going to move the needle, and people are working on bigger things. And what you don't want to do is say, well, let's just expedite it and just stamp it through, right. It'll be expedited process because then all of a sudden, you look across a portfolio, in the aggregate there's big pockets of money where the underwriting process wasn't as rigorous. So, one of the things we've been really successful at, that we identified also as an opportunity was, how do we re-engineer this? This is bothering us. It's bogging us down. And so, what we've done is created some strategic relationships with partners that we've worked with for some time and set up these accounts that are very flexible. So, we have discretion. And we got allocations pre-approved through our internal investment committee. And we said, look, if anything comes through, it's going to this structure so that they can underwrite it, right. It's off of our plates. And what we also figured out is that a lot of our GPs have, not so much, co-investments that are deals that are going in the funds, right. And we're exposed to it either way, and we're taking the overage. But a lot of our GPs have opportunities coming across their desk that are just not eligible for their funds. And we saw that as another opportunity. And that's been, I think, a pretty good hunting ground for us because it's a deal where they would want to do it personally, but it's too big of a check for them, personally. Maybe they want to do it with their family office. Maybe they can't raise LP capital. It's one of those awkward amounts where I'd need two or three LPs. And we found out stepping into the position and saying, hey, if something comes across your desk that doesn't fit in the fund, is a tremendous competitive advantage for us because we're providing a solution for them. And we're glad to do it. We've done a handful of those transactions now. And that's an opportunity set that we didn't suspect would be there that is there. But this happens. Once we started approaching GPs, I was shocked how many of these transactions are coming across the desk. And they've been so far, touch wood, it's early days. But some of our top investments, I mean, I think we've done three or four of them. And they'd probably be maybe our three or four best investments so far. And the last one I'll mention, from an industry standpoint, that's been more top down is sports. I think sports teams and major leagues and what we call challenger leagues, so esports, et cetera. One of our underlying investments is a soccer team in England called Ipswich Town, which is in the third tier. So, if anyone's seen Welcome to Wrexham, they're in the fifth tier. But we don't control it. We basically own it through an SPV and there's a general partner there. But I think all the major leagues, NHL, and Major League Baseball, NBA, they all change their rules in various forms to allow more institutional ownership in the groups. And there's just been an explosion of broadcasting revenue, which has really been pushed down to the teams and the players. Created a lot of wealth. And you have team valuations, right, that are just approaching levels that exceed the average net worth of billionaires out there. And they figure out that they need institutional capital. And they like that most the institutions are governed, right, or your financials are public, things like that. So, I think you're going to see tremendous growth in things like pickleball, lacrosse, things like that. And pretty constructive on that space.

Dakota: Yeah, I think NFL franchises have compounded about 18 to 20% a year for the last 20 years.

Mark Steed: Right.

Dakota: When you look at that YouTube deal, you look at that Amazon deal, that's setting the groundwork for streaming. And I think these things are all going to double from here. And who knows, double. But you mentioned pickleball, and I mean—

Mark Steed: You're exactly right. I mean, look at the Phoenix Suns right in our backyard. Just sold to a gentleman from Michigan who runs a mortgage business.

Dakota: Michigan State guy. Michigan State basketball player.

Mark Steed: Yeah. Four little or 4 billion maybe. I think it was the valuation and dial through the home court partners, what they call it, right? They invested a year and a half, two years prior to 1 and 1/2 billion valuation, right.

Dakota: And I think they left Steve Ballmer out of the room when he paid $2 billion for the Los Angeles Clippers, saying, oh, just a techie coming in, not knowing what he's doing. I mean, compare that trade versus Microsoft. Well, Microsoft's had a good run, but these non-correlated assets are brilliant.

Mark Steed: That's the point. I think that you have season ticket holders. People will watch sports. And so, there's just an explode when you think about all the smaller leagues, right, all of the Division II football, basketball, right. All the high school sports. I just think there's a huge C wave right there that is just prime for institutional capital.

Robert Morier: Well, it sounds like a lot of innovation is going on at your plan, so it's exciting for us to hear about. We really appreciate it. Within your answers, though, it was interesting, we were talking, and you touched on time horizons. It seems for, again, the students that are listening in who are being taught from me, believe it or not, about venture capital, venture seems to be increasingly looking to deploy funds in companies where they can achieve these returns over a shorter time horizon. So generally, one to two years. What do you think that means for your approach to venture, if time horizons are potentially shortening for a plan like yours? And if you were to give some advice to the students on the line, what do you think that means as they're considering launching a startup in an environment that's looking to achieve one to two years' returns, where historically it was five to seven, seven to 10.

Mark Steed: Yeah. Right, so I think it's helpful to understand just the context of the ecosystem, right. And a lot of the venture funds get money from institutions like ours. Not all of them. Depending on the size, right. They might have friends and family that could be endowments. But for the most part there's someone providing the capital, right, and that's typically where the pressure comes from. And they're competing with other venture funds who are approaching those groups, or those investors are approaching those funds. So, there is that competition. And I just think it's important, one, to just understand that that's happening. The fact that you have put your finger on that and that the students are thinking that, but that's important to know. But listen, venture it's always involved a healthy disregard for reality, right. I mean, you talk to a hundred venture investors if you're an entrepreneur. You have an idea. You talk to a hundred venture investors and they're going to give you a hundred ideas about how to redo your pitch book, right. Or how to restructure your idea. And that's going to be very frustrating. And I would just say, one, it's just important to recognize the reality of the market. That's where it is, right. And if you're raising money from that group of people and they're demanding results in two years, I think it's important to just say, OK, well, we need to go somewhere else because that's frankly what the client is telling you, right. And so, I just think going in with eyes wide open as an entrepreneur is just really what you need to do. And lean into it and just accept it. And be generous with yourself because there's always, like I said, there's a lot of luck in randomness and in the outcomes. And like I said, you'll get tons of different feedback. From our standpoint, that's not our view at all. We've been very constructive mostly on biotech, life sciences. So those drugs take a long time to develop and make their way through some approval process but even sometimes not. It's just that some drugs acquired just on the basis of science, right, because the large pharmaceutical companies are effectively outsourcing their R&D and investing as limited partners in venture funds. And then picking off promising science sometimes or drugs that are early stage. So, I would not look at venture as a two-year window. I think a lot of that came from the SPAC craze of last year, where you were coming in late stage and then try to get the bounce from the public market. And I think that's gone or will shortly be gone out of everyone's sight, out of everyone's psyche. I think it's impossible to build a multi-million or billion-dollar business in one or two years, unless you get very, very, very, very, lucky. What I would think a venture investor might get is an up round, right. They might have a paper gain. But if I were a student, I'd be saying, you might be looking for a paper gain in two years, but don't make the classic strategy mistake, which is trading long-term gain for a short one.

Robert Morier: Well, we just have one more question for you, Mark. This has been wonderful. We really appreciate it.

Dakota: Well, we actually have a hundred more questions, but we have to be sensitive to your time. Mark, as somebody that sees allocators all day, every day, all week, in our team, you would be a very difficult person to visit with because we don't try to take more than a half an hour of people's time.
But I could sit here and talk with you all day, probably everything other than investments. I mean, this is what makes the business so interesting. Just meeting the personalities and things like that. But you blend them too beautifully. And I think I'm going to say, hey, by the way, Mark, I'm coming through. Can I have three hours of your time?

Mark Steed: You're so right. But you're right about the relationship and the people you meet. There are some fascinating people in the business. Absolutely fascinating, right. And that's been, I think, the most gratifying part over time. At the end of your career, you're no better than your relationships in the industry and your legacy.

Dakota: Well, what's that classic study that Harvard did? It's starting to get a lot of props these days. They followed the class of John F. Kennedy, and they pulled all these successful folks. And at the end of the day, the number one determinant of happiness was personal relationships, and money was not even on the scoreboard. But I'm interrupting your last question.

Robert Morier: You're not. It actually took me into my last question.

Dakota: One final question.

Robert Morier: One final question.

Dakota: Final jeopardy!

Robert Morier: But it did because it's the personal side of it. I was excited to be able to speak with Mark. My dad started his career as a fireman. He's actually ending his career as a fireman. He's a volunteer fireman in Cape May, New Jersey. He directs traffic. He's not kicking down doors anymore.

Dakota: He was.

Robert Morier: But he was, and he was very excited that I was speaking with you, Mark, as a representative of these plan participants who put a lot of risk on the table to do their job. So, my last question is, can you tell me what running towards adversity means to you and your plan participants and to your investments?

Mark Steed: It's tough to describe. Let me show you some interesting pictures. So, I mentioned the investment in Ipswich Town, which plays in the third tier. This picture to the right is a picture of the CEO of Ipswich Town FC and is a police officer who was burned in his Crown Victoria as it was rear ended, I think back in 2003 or 4. It's a national story, right. Anyway, the CEO, because we at one point thought that we would directly own the team before we decided to go to the SPV route, he's like, I'm really looking into a way to rally the team, right. And I go, the one thing that will irritate me more than anything else, since we represent people who run into the bullets, right, like you said earlier, these people take risks. They run towards the fires, right. They run towards the danger. Use that as the rallying call of the team, right. Embrace adversity. It's going to happen. I think one of the best ways to deal with it is to understand that it happens. And to think ahead, what happens when you face it so that you're in the moment, you're not panicking, right. And this has to do with soccer. It's been great for the team. So here you see him presenting a jersey, I think. Or as they call them, shirts. Jason Schechterle. I think there's a picture here. This is right above their locker room. So, all the players have signed it. You can see right here, it's right on the inside collar of their home jersey. And so, I've actually been pretty pleased. I wish more of our investors would understand ultimately the beneficiaries of the program and take that message seriously. A couple of them do a really good job of it. But look, like I said, we don't control this investment. But I was pretty pleased that they were ultimately happy to embrace the ultimate capital source of the team and use that as really the ethos of the team. And that's what it means. So, I think it's a special investment. Wish them the best of luck.

Dakota: I don't want to steal the thunder with your final question, but just came to me. With the promotion and the respect that first responders have always had and are getting more and more, has the plan seen any donations from just the public? How do I contribute to this plan? Have you seen that? Albeit it might not be a lot of money but just a few dollars here and there for people saying, you know what, here's some contribution to an entity that keeps us all safe.

Mark Steed: Yeah. It's a good question. You can't contribute to the pension system. But I think the best place to contribute is what's called the 100 Club of Arizona. So, the website is www.100club.org. And that's an organization that provides financial assistance to families of first responders who are seriously injured or killed in the line of duty. And I think that's the best place for donation dollars and would heartily support anybody sending money their way.

Robert Morier: That's wonderful. Well, we'll be sure to put that website up on the—

Dakota: Oh, for sure.

Robert Morier: -- on the podcast site, Dakota site. Mark, thank you so much. This was a wonderful conversation. We really appreciated it.

Dakota: What a treat.

Robert Morier: Yeah, thanks for your time, Chris, as always.

Dakota: Well, I'm tagging along here. Thanks for letting me sit in. And this was just a special treat to sit and listen to a smart investor. But just the whole humanity side and realize that when we're all calling on people, there's the job at hand, but there's also the relationship and the ability to have a connectivity throughout a career and beyond.

Robert Morier: Absolutely. And to our students at Drexel University who stood by quietly throughout this podcast, thank you very much. It was very good for you to join. If you want to learn more about Mark and the Arizona Public Safety Personnel Retirement System, please take a look at their website at www.psprs.com. You can find this episode and past episodes on Spotify, Apple, Google, or your favorite podcast platform. We are also available on YouTube, if you prefer to watch while you listen. And finally, if you would like to catch up on past episodes, take a look at our website at dakotalivepodcast.buzzsprout.com. And again, thank you for joining us, Chris. Mark, thank you so much. It was wonderful to see you, and we hope to see you again soon.

Mark Steed: Yeah, thanks so much for having me, guys.