



Stanford eCorner

Understanding Venture Capital [Entire Talk]

Dana Mead, *KPCB*

November 16, 2011

Video URL: <http://ecorner.stanford.edu/videos/2811/Understanding-Venture-Capital-Entire-Talk>

As a partner at Kleiner Perkins Caufield & Byers, Dana Mead supports entrepreneurs and innovators seeking to make major impact through life science technologies and ventures. In this lecture, Mead talks about Venture Capital, offering great insights about Silicon Valley and life as a venture capitalist.



Transcript

Dana. Thanks, Tina. Hi. So, Tina has told me, so far this year you've had all entrepreneurs, is that correct? So now you get to talk to someone that sits on the periphery of the ecosystem around innovation because entrepreneurs in our view, certainly in our firm, sit right in the middle and are the most important part of that ecosystem. We sit on outside, we are support service, just like the accountants and the auditor and the lawyers and other folks that support innovation and try to support them moving forward. So, what I am going to do, Tina said, it might be helpful to just talk a little bit about venture capital, who we are, what we do, who's money we invest, how we think about doing new ventures and just pass on a little bit on what we look for when an entrepreneur comes to visit us with a great idea. So, what I am going to do is start by just talking little about Kleiner Perkins. We've been in the venture capital business now for 39 years. In our business, as you will notice, if you ever go on a website of venture capitalist or talk to venture capitalists, we love logos. So you are going to see a lot of logos, whenever you deal with venture capitalists.

So, we kind of talk about in life sciences our first investment was Genentech and you can see many of the other names along here from Google and others that we've been fortunate enough to be part of over the years. So, we'd invest in - any venture caps you talk to, very few will probably tell you they invest in small ideas, right? So we all try to invest in very big ideas and we also try to invest in ideas that are going to make a difference. Our firm is really focused in three different practice areas, digital and we do a lot obviously with Apple with our iFund and we have a sFund. So those are really around mobile and social and intersection of those two. In life sciences we have a number of initiatives, one large one is around cancer, another around stem cells. I am going to talk a little more specifically about that and then finally Greentech, everything from hybrid cars to smart grid et cetera is other big focus of our firm. Now I wanted to give you a little bit of an idea, we just try not to do this in a haphazard way when we look at opportunities in places we want to invest our capital. This is just for the life science group and I am going to use as an example our main investment areas as you can see are around diagnostic devices and therapeutics obviously there has been a convergence around a number of those and you can see some of the key things, one around the emerging healthcare consumer, all of us as healthcare consumers are much better informed, more involved in the choice and also paying more of the load and we will pay more in the future. And then also personalized medicine, what I mean there, that's the right therapy for the right patient at the right time. Many of us take drugs and other things that were shown to work in a large population but they might have only worked for about half the patients that were studied.

So we want to use drugs in the future that we know are going to work for us as individuals. Then around that little solar system that goes around outside, our combination of the geography, China as well as some different types of technology, neuromodulation is implanting these neurostimulator in your bodies with leads which stimulate nerves to treat things like Parkinson's disease, sleep apnea, back pain et cetera. IT enabled services, we believe that's a very big area if you look at what's happening in healthcare investing right now. Biotech investing and device investing is flat or a little bit down. But there's

a lot of focus on IT enabled services. We just invested in two companies, one is Teladoc which is telemedicine, so we have 150 doctors around the country, all states have licensed doctors in this network and you can call and get a doctor speak to them in 20 minutes, they spend 15 minutes on the phone with you and often it's the same thing as you get if you went in to see a primary care doc. With healthcare reform it's going to 40 million new people that are going to be now insured. Many of which don't have primary care physicians and when they get a cold they go to the ER. That cost insurance company \$1,000 versus using something like Teladoc. The other one we just invested in is called Awarepoint and what Awarepoint does is real-time asset tracking.

So, just think in a hospital of tagging all the IV pumps. Tagging the physicians, the patients, the nurses and understanding where the equipment is, where the nurses are, where the patients are and the juxtaposition of all of those and having a software layer, that does workflow et cetera. So if a patient is exposed to something they are not supposed to be exposed to or virus in a hospital. The way that's dealt with now, is they have to pull all those charts and try to figure out where that patient was, what care givers in a face with that patient. Now with this type of technology within a minute and half you can tell all that information that you needed to search before. We've also focused on imaging, I think all of you know that imaging is changing, not only CT, MRI now that's now very small portable imaging, this going on there. The ability to move imaging data, they are very thick dense files, to be able to move those around, it's interesting. Electrodiagnostic, where we focused on there is really gene expression and using that again to identify the right therapy for the right patient. We have a fund in China and we have life science partners in China, we believe there's a ton of opportunity in China around life science ventures and we are focusing there. Cancer has been a focus and then finally we have a company that focuses on stem cells.

So just to give you an idea in just one area of our practice, how we use this type of model to guide our strategy. So this is what our firm look like 30 years ago, now these big wide-rimmed glasses are coming back in again, right? And those ties are about the same width that we're wearing again now. But I just put this up here not to just give my partners a hard time; a few of those, John Doerr in the middle, down the bottom and Brook Byers up on the far right, are still active partners in our firm. But really to talk about, how our industry has evolved and this is our partnership now. And I am proud of this not that there are just a lot of people on there. But really proud of the diversity of our firm. Really the background diversity, obviously gender and ethnic diversity we have in our firm and you can see partners from our practice also in China. So a much larger group focus now on practice areas, it's been a much more diverse group and we believe that diversity that you see in this slide better reflects entrepreneurship and innovation around the world in that previous slide you saw. So if you just step back and I use these dates 1980 and 2006, to really talk about how the venture capital industry has changed dramatically. So if you look at 1980 there were approximately 100 venture firms, approximately 1,000 venture capitalists in the country.

By 2006, it's basically 10 fold change and just look at the amount of capital that was raised in those two years, in 1980, \$2.1 billion and almost \$30 billion in 2006 and then it's - amount of total venture capital money under management, \$235 billion in 2006. So it went from a very small boutique industry to asset class and how did that happen, it was really driven by university endowments and two in particular, Stanford here with Mike McCaffery and Yale with David Swenson, and what they saw was they said and they wrote books about this, they said it in your portfolio of assets that you manage, which would include equities, real estate funds, private equities et cetera, you need to have part of that allocation in venture capital that wasn't a big allocation, it was 2% to 3% but they said you needed to have venture capital and so those endowments, a pension funds et cetera then came and said look we want to get in venture capital and that was really was drove the growth of the industry. So if you look at the industry from a geography and these are 2008 data, they haven't changed very much at all of the mix. So in this year we are on track to have about \$28 billion in investments. So very similar to this mix and if you look at the mix of the investments, it's very similar to these data right now. So information technology software is still the biggest area. Life science is second with biotech being a little bit larger than devices and then you can see Greentech basically came out of nowhere in the mid 2000 but now stays about \$4 to \$5 billion a year VC investment. Another interesting thing if you have interest in venture capital starting companies California obviously is a great place to be and about half of that venture capital is invested every year in California and we'll talk about why that's the case. And you can see some of the other markets, I often travel around the country and everyone wants to recreate what we have and research triangle Boston, San Diego, Minnesota area, The Northwest are all interested in gathering and gaining some of these investment dollars. So this just gives you an idea and we all know the challenges we had in 2007, 2008 with economy and you can see a dead effect that venture capital industry significantly.

So the bottom of those two lines is the amount of venture capital that was invested and the top is what was raised and you can see this year these data are through the third quarter, we're on track to raise about \$16 billion and we're on track to invest about \$28 billion this year. But it's been much harder for venture capital firms over the last few years to raise money. And you might say, why is that? Well remember what happened to endowments. Many of the endowments, because they had a lot of their endowment in equity got smaller in order to meet some of their commitments, they needed to sell some of their assets and they weren't as interested in some of the alternative investments like venture capital. So if you look at this year so far, about 146 venture capital firms have raised money this year. They've raised about 26% more than they had year-to-date last year. Life science and green tech is down slightly as I mentioned and digital as you can imagine from what we all read every day is

the strongest it's been in 10 years. So there's a lot of investment going into digital opportunities, in mobile and also in social. So whose money is this that we're investing? I mentioned in endowments, foundations and there's funds-of-funds, those are people that raise money and by their unique access are able to then invest those people's money into venture capital firms. There is also individual investors.

So CEOs that have been very successful that we've worked that with historically, they're investors in our funds and then our - the partners themselves, all of us invest in our funds also. And those are called the limited partners of a fund and that's how it's made up. And every fund is a little bit different on the group that they have. We started with a much larger group of investors and over time, focused down on the smaller group. People ask sometimes, how are venture capitalists paid? Not different than private equity. We get a management fee on the money that we manage and then we also get part of the upside carry, so real simple. There is \$100 million, the management fees are normally between 1.5% and 2.5% on that money, paid annually. So let's pick 2.5%. So the firm would get \$2.5 million a year on that \$100 million. We would use that to pay people, run our business, do all our diligence et cetera.

And then we get carry and carry normally ranges between 20% and 30%, what's that mean? That means once we've returned that \$100 million to the LPs, anything we make on that, a venture capital firm will share 20% to 30% of that. So if we double that money, we would get 20% to 30% of that additional \$100 million and that's the carry. So that's kind of the upside opportunity for venture capitalists. So, I was asked, well who are venture capitalists? And do you grow up? There is a kid saying, I want to be a venture capitalist. I don't think so. And I think one of the reasons are as we've showed a little bit early, there's only 7,000 or 8,000 venture capitalists, right. There are 750,000 doctors and about 800,000 lawyers, right. So I know when I was growing up, I wanted to be a lawyer, my brother wanted to be a doctor. I'm a venture capitalist and he is a business person. So we didn't actually - weren't able to do that.

But if you do go into venture capital, I've kind of broken it down into three cohorts here that are the most common. One is, someone gets a good undergraduate degree. They get a little bit of experience and they get some form of graduate degree. Sometimes it's a PhD, it could be an MD, it could be an MBA and I'll talk about in our partnership we have a mix of all these people. And that would come in as kind of a junior person and often I see this out of a good MBA program, people will join firms as a general partner. Some of those will have kind of a two to three year window in that firm and then they'll be asked to go out and get some more operating experience. A few of them are able to work all the way through up, through the partnership. But it's normally two to three years and different firms have different philosophies on that. That's one entry point for venture capital. Another entry point is, someone gets a - some form of degree like I've listed here and they go out and get a different level of operating experience.

Maybe eight to ten years of operating experience and then they come into venture capital. That's another very commonplace. They maybe come in as a principal or a junior partner in a firm. And then the last option is actually the one that I did was where you get 20 kind of plus years of operating experience and then for some reason at that time, you either get recruited by a venture capital firm, or are you're at a place in your career, maybe you sold your company. In my case, our company Guidant was been purchased by Johnson & Johnson at that time, it ended up being Abbott and Boston Scientific, but that was a natural place in my career where I looked at different options. There is no right choice across this continuum or wrong choice, venture capital is a little bit different. We don't have a recruiting season like the consultants do, like McKenzie comes here every year to recruit. We don't do that. So if you want to be a venture capitalist, one of the things you'll want to do and we'll have more time in Q&A to talk about this is you want a network and you want to talk to people, you want to meet people. You want to stay active in your network because the jobs are organic the way they present and it's a little bit different than others.

But if we - I just look at my partners in the life science group, we have two MDs, three MBAs and a PhD, so kind of a mix like this and we have kind of an equal group of where we entered the business. So what do we do every day? Tina asked me this. We don't play a lot of golf, people think that. At least I don't, if you saw me play I would prove it to you. Really we spend our time in three big buckets. And I've listed the buckets kind of in ascending order here where we - we look at a lot of investments. We probably invest in one or two a year as an individual venture capital partner. I will probably look at two to three hundred ventures myself this year. Actually either talk to someone on the phone or meet with someone in person. So we invest in a very small percent.

I said 1% to 2%, it might be even a little bit lower than that. So we practice really hard every day to say no, really-really nicely. And the reason why we do that is that person could two years later walk in with a Google or a Genentech and so we always do and I do personally offer to help people and talk to people, we do that on a regular basis. Once you have an established portfolio like I do, I'm on 12 boards, you don't have the time or bandwidth to look at too many ventures but - so you have to be very efficient about your time. When I first started, when I didn't have any boards, I spent 70% of my time looking at new ventures. Most venture capitalists once they are established probably spend about 10% or 15% of their time looking at new ventures. The second thing you do is networking. Quite frankly, that's one of the most fun things that I do and I would

consider what we are doing right now, networking. So I meet with people all the time. I'm fortunate if I get to mentor actually Mayfield Fellow students.

I saw one or two of the folks here tonight and we do a lot of that. Meeting with other VCs; I call it the VC lunch where you meet with VCs and at the end of every lunch you say, we ought to do something together, right. That's how every lunch ends and there's a lot of VCs and throughout your career if you talk to people who've done this for 34 years, there is 10 to 15 VCs they work with, out of that whole cohort of VCs. And the reason why, it's the people you are on boards with, the people you trust, the people you like, the people you want to work with over time. And so it's a small cohort of that. But we're not really in competition with each other because as companies continue to grow, they have a syndicate and normally we have three, four, five VC firms working with them. So it's a very collaborative thing. I don't really consider it. I haven't worked in operating roles where you actually hated your competitors. It's not like that in venture capital at all.

And then the last thing we do which is a really fun thing, especially for someone with my background is get into work with the companies and there are four really big areas where we spend a lot of time. Recruiting and one theme that you'll hear from me is the people obviously are the most important in any business. The quality of the people, especially in small business, they don't grow like this. They grow like this and they have many near death experiences through their growth. You need great people, their ability to deal with that change, be agile and make changes. Obviously, these help raising money. We work with strategy and then we - one of the biggest things we do is just apply our network to whatever the challenge is or that the company has. So really three things we look at. So new venture walks in our door, we break all the different risk into three major areas and I'll pick life sciences to talk about. So we have technical and clinical risk in life sciences.

So we try to figure out what that technical risk looks like. We try to put some boundaries around that risk and we try to ask ourselves, is there's a - is there a way with the reasonable amount of capital for us to mitigate those risk. The second thing we look at is market risk. In our firm, we're willing to take very gnarly technical risk, but we don't like market risk. So a bad thing in our firm would be that we solve this really difficult clinical problem or this really difficult technical problem, we take it to market and the market yawns back at us. We don't want that. If we go through all that time and all that risk and all the hard work it took to get there, we hope the product is a commercial success. The most important area, an area we spend a ton of time on is management. A lot of people say management, you do a lot of early stage investing so it's two people, a dog, and a patent walk into your office, I mean is that the management? How do you think about that? Well, what we do is, we look - in that case, we look at who is associated with that venture. Who are people that have given them money? Who are people that are giving them advice? Is the quality of the team you have right now when you combine that with the quality of idea, will they most importantly attract great talent as they move forward as a team.

And so in each of these areas, we're thinking about those three things and those are the three most important things we look at in a new venture. So where does some of these new ventures come in, I'm going to use come from. This is just life science example. So if it's in the university setting, which it does happen, and we've invested in a lot of things out of Stanford, it usually comes from a combination of that group there, goes through an OTL office, that's a outplacement office. If it does that we make an agreement with Stanford University, we pay them some milestone payments and they might get some equity and there might be some royalty down the stream, if the product does extremely well. That's one form. Another is it just comes in the device world where innovation takes place. Unlike biotech, where it's really a scientist working at a bench, a chemistry bench, in life sciences, it's an intersection of the physician, patients and what I call educated observers. Many times physicians because of the way they're trained, they're trained to incrementally improve on a proven procedure. So a lot of times they'll say, oh, I really like that device but I want to be on a different angle.

Now there are a set of very innovative physicians that do come up with a breakthrough technologies. Usually with innovation is, there is a very educated observers. People with backgrounds like yours watching a clinician interface with a patient and coming up with an idea. So both of those either way you get to a point where if you have a great idea, you want to try to get it funded and how do you get it funded and we're going to talk a little bit more about that. Well, you don't go directly to Kleiner Perkins. That would probably not be the right place to start. What you probably want to do is find some people that are going to help you and I'm going to talk about this a little bit more and many times that first money comes from friends and family, it might come from angel investors and now angel investors are changing a great deal, not as much in life sciences where they do exist, and there was what called bands of angels but really in the digital side, where the super angels are really coming forward. And these are people that not only writing small checks, but they are starting to write larger checks and so people are coming potentially to venture capital a little bit later. So normally those angel rounds are - could be \$50,000, a few hundred thousand dollars, maybe up to a million or two dollars and that's normally when we see people coming to us, where they've raised about a million or two dollars and they're looking for their first quote through institutional round of financing. So what I'm going to do is walk through kind of the life, the financing life of a life science venture.

So we talked about that angel round, right, two - about 200,000 to 2 million. And then we get to this Series A round and so I'm going to come back to this in a second, but I want to talk a little bit about how these companies get valued, because people

ask me that all time. I've got this great idea, what's my value, okay? Let me tell you, there is no formula on how these values happen, right. So with a big company, a big company is buying another company, they are trying to value, they do discounted cash flow analysis to figure out valuation, our net present value to figure that out. You can't do that in our businesses. So in this example, we picked a pre-money of \$5 million. Now, how did we arrive at \$5 million? Well, it's kind of about the number that a very new venture with an unproven technology, many times they come in and they are valued in that anywhere between \$2 million and \$10 million range. So they've raised a \$1 million. They've done some good work. They've got some intellectual property.

They have some good ideas on how they want to move forward. So let's pick that pre-money of \$5 million. Let's just make this easy especially for me, it's \$1 a share. So the founders have \$5 million shares because that's the pre-money, a \$5 million. They are going to divide that up between what they keep and what they're going to put in a management pool and that equity will be used to track other talent to the company. And then Kleiner Perkins says that's great, you have a \$5 million valuation, you need \$5 million, we're going to put \$5 million in and buy 5 million shares, okay. So then the post money value would be \$10 million, right; \$5 million pre, \$5 million new money, \$10 million. And then the post money fully diluted ownership would be, Kleiner Perkins would own 50%, the founders would own 30% and the management pool would own 20%. So that's very similar to what most cap tables look like right after a Series A investment if you just have one investor going in the company. So let's go back to this.

So, you've gotten that investment, your \$5 million, so normally what that gets you in a life science venture is kind of a first inhuman experience. So you take your technology, you club all together, it may not be your final technology, but you try it in a patient. That's the first thing. Then you need to raise money again, the Series B round and what's your goal when you raise money the next time? Well, to have a higher valuation on the company, so that the new investor has to pay more for those shares. So they get fewer shares and it dilutes you less, right. The fewer shares you sell, the less dilution you get. So that's really the process you go through all the way through. And this would be a basic 5, 10k device venture, where you're probably going to raise \$50 million to \$60 million over the life of the venture from four to five venture capitalists over that time. So when we look back at successful companies that we've invested in, what are those success factors? Remember, I talked about the leadership and the passionate founders, there's no substitute for that. Venture is focused on large underserved growing markets obviously make a lot of sense.

Reasonable financings for both investors and entrepreneurs a sense of urgency obviously, we talk a lot about missionaries, not mercenaries, so we want people that are excited about doing something big and important to change something not about what the exit is going to be. If they're focused on the exit, those are usually fairly short conversations in our partnership, because we want people that are focused on big ideas and moving things forward and if that happens, the exit will take care of itself. So this is what I call trade secret. So when people come to me, the number one thing that turns me off is that people are imbalanced. Okay, remember, we're venture capitalists. We understand these are very early companies. We understand there are tons of risks. So don't be afraid if you come in to talk about what the risk are? Yes, be passionate about what you are doing. Yes, be optimistic about what you are doing. But don't be afraid to talk about the risk.

So people that are balanced in their view - now, we want passionate people and obviously to be a great entrepreneur, you can't be irrational, right, because people are going to tell you it's a dumb idea. They're going to say no to you all the time and that passion is what's going to make the company happen. But at the same time, having some balance is good. Here is an example. Often people come in and we get to the five-year P&L and it will look like this hockey stick and not one device company in the history of mankind has ever achieved this hockey stick. So you'll ask the people, well, where did you come up with that number? Well, I think this would be a really good company. Yeah, you're right. That would be a great company, but you want to be balanced when you do that. You want to show the passion obviously and the idea and the vision. I think people - that's contagious and we want to see a big vision for the company.

We want - you should really leverage - I mean this Bay Area is incredible. The number of people that are willing to help you for nothing just because they want to help you and we'll talk about that a little bit later. Ask people, people rarely say no when you ask them for help and that's on your strategy on which VCs to go to, people that they know ways to position the business, all those things. You can find people, tons of them in this area that are willing to help. I mentioned don't focus on the exit, you have to be persistent, even the best ventures were said no too many, many times. I think you've heard that. Focus on just getting the top people. So I would focus on fewer people, get the best possible people you can possibly find and obviously, we enjoy being around people like you do that are fun to be around and are excited about what they're doing. So I would certainly focus on that also. So what I want to do now is talk about what's so unique about our ecosystem here and you can maybe bring this down to U.S.

and individual. So one of the things you need to have in an innovation ecosystem is you need well-trained people. So if you don't have large companies and I'll use life science as an example. I work for Guidant. We had 2,000 employees, well-trained people in the device industry in the Bay Area. Then you'd go up to South San Francisco to Genentech. You cannot go to a

biotech startup in the Bay Area that doesn't have ex-Genentech people. You cannot go to a device startup in the Bay Area that doesn't have ex-Guidant people. So those are the people that need to be there at critical mass, and so for instance, a research triangle in North Carolina, they've got the biotech but they don't have the device people and there are not that many device ventures there, because they don't have the people to work in those companies. Same thing with Intel and HP and others, you cannot go to an IT venture and not have people that worked with these companies.

So that's an important part of the formula. Another part is the capital infrastructure, so having the VCs, having the lawyers that were willing to do the work at risk, having the people like IDO and then there's a less number of people here at Stanford of serial entrepreneurs that do company after company. The thing though that for me and the one that was missing there that I normally have are the great universities. So you've got University of California, you've got UCSF, you've got Stanford and obviously you have the research engines that those bring as well as the talented people. The one that really drives a lot of it in my view is the fact that so much of our peninsula lives between 280 and 101. And every weekend, I have four boys, at my kids sporting events, I bump into all kinds of people that I work with on a day-to-day basis, doctors from Stanford, engineers, people I work within the startup and that proximity of interface is extremely powerful in this peninsula having water on each side, makes a really big difference in that. And there are three other factors that don't get talked about a lot. One is the spirit of collaboration that I talked about earlier, where people will help you and they are happy to help you in what you're doing and the diverse populations we have in the Bay area, it's incredible that we have critical mass of these diverse populations so people can come all - from all over the world and come into our community and feel comfortable and have a critical mass of people like them, that think like them is extremely important and others the country don't have that. And the last one, which I call the 'Palo Alto-Cambridge reaction', and I'm from the Northeast, so I can say this. If you go to a cocktail party in Cambridge and you tell people the last three companies you did failed, people will look at you sideways.

In Palo Alto, if you have that same conversation people will say that's awesome that you did that in those three companies. And your fourth company is going to be a world beater. Very, very different type of culture. One is not better than another, they are just different and for innovation, we've got a very neat culture. So I think it's an exciting place, obviously other people are trying to recreate it also. So in summary, I always implore people to create their own innovation ecosystem. You've got all these incredible resources around you, get together with people that complement your skills, that stretch you, that do things differently, that think differently, you've got that opportunity. You know, as I mentioned, team with people with other backgrounds than your own. Obviously invest in IP, look for big opportunities, be passionate and most important thing and I was this way in my operating company, I hired people that were enjoyable to be around and other people enjoyed to be around that were positive, optimistic, there's plenty of smart people that are positive and optimistic. Put those people around you and you'll have a great environment to do that.

So with that, I would love to take questions. Thank you. So I'm going to start out, okay. Okay, it's an executive privilege that you get to start. Well, just because I'm going to let other people percolate ideas. Okay. So, I know that people think of venture capitalists as risk takers but really isn't your job to try to squeeze all the risk out of the venture? Can you talk a little bit about that? Sure. So as I mentioned earlier, they - we're willing to accept risk. There is a certain level of risk that we're willing to accept and really what our job is, as Tina mentioned, is to really try to mitigate the risk the best we possibly we can. And many people describe that the white-hot risk whether that's a clinical risk or a technical risk, what we try to do, as I mentioned earlier, is put those risks upfront and solve for those risks before we get five, six, seven years and \$100 million of capital down the road.

So yes, and so that's what we're continually doing and we try to look at it. Unfortunately, sometimes it's hard because over a six, eight-year period, things can change dramatically in the market, another technology can come out of somewhere, and that's really why there is a high mortality rate in early stage venture capital. Not all the companies, I showed you a lot of logos of very successful companies. We probably have another 100, 150 companies that were not successful, okay. Now, they could have been great ideas and for different reasons, they didn't happen. So what we try to do is we try to look in those big buckets of risk and within each of those, we try to do that and we do a lot of pattern matching. So we over the - looking at a lot of companies over many years and working with many companies, we have some patterns of things that worked and patterns of things that didn't work and we try to pattern match those the best we can to minimize risks but all of these ventures are risky. That's why they call them ventures, right? Some will fail. We probably aren't doing our job right if some of them don't fail because if you shoot really high and you do what we call in our firm, you do the black swans or the grand challenges, some of those are going to fail, right? In life sciences, the failure rate is probably not as high in IT. But in IT, the home runs are bigger home runs than they are in life sciences.

So we have to have a lower failure rate. You think about venture capital, it's really about slugging percentage, right. How many home runs you hit versus batting average, how many singles you hit. Because a home run or two can make up for many companies that don't do well and so we have to balance that. Yeah. So as a whole, VC industry did not very well last 10 years, so can you say what is your opinion why? Sure. And what do you think will be in the future for this industry? Sure. So I guess the observation was - is that the VC industry has not done well over the 10 years. And I think that's very fair if you look at the

industry as a whole and if you take out some great outcomes like Google and others, I think it's very true. I think the last few years are starting to improve.

And if you look at the history of venture capital, a lot of the success has really been built around the strength of the public markets, the ability to take companies out as an IPO. Now in life sciences, especially in the device area I am, about 90% of the companies get acquired, they don't get public, but in the digital sector obviously the public markets are extremely important. So if you look at the history of the industry, a lot of the success or the large returns were over kind of three-year periods and if you look over the last 40 years, there is probably five or six three-year periods where a great deal of the returns to LPs were created. We haven't had one of those three-year periods in the last 10 years. And so until we have another set of those - another wave of three-year periods which I think we will, and unfortunately, they are very hard to predict. I think we were headed towards that in 2007, 2008 and then obviously the global financial crisis really hurt that. So we, many firms, including us, had a lot of great companies that were timed very well to participate in that and did not because of that. Now, I think you're seeing, your observation is what investors are observing obviously. And that's why it's been harder to raise money. I think that's changing.

The top tier firms historically have not had a hard time raising money because they had a very small supply. So for instance, someone like a Harvard as investor in us and they had a certain amount of money they were able to invest in our funds, that didn't change for 20 years and their endowment went from 3 billion or 4 billion to 25 billion during that same time. So venture capital in the top tier firms became a very scarce asset. The other thing with venture capital is, remember, these funds are 10 years long. So it takes a long time to cycle through funds. So for the industry to change dramatically in size et cetera will take time. We are in a process now where the industry is shrinking again, not super dramatically because it takes time, but it is just shrinking a little bit which I think will ultimately be healthy for the industry. You saw how fast we grew there, any time any industry grows that fast it probably doesn't grow as effectively as it should and so I think we have a chance to do that. So your point's well-taken. If the industry doesn't generate good returns over the next three to five years, it will be harder and harder for firms to raise money.

But I do think if you look what's happening, some companies obviously are getting out on the public market now, they are doing fairly well in the public market, we believe there is for high quality companies an opportunity to become a public company. And so hopefully, that trend will continue. And that will help us all because the quality of the company is if you look in the portfolio of the venture capital firms, there is very good companies that normally, in a healthy IPO market, would be able to get out very easily. So I don't think it's due to the quality of the companies, it's more due to the international kind of global economic issues and the impact that's had on the U.S. and other markets. So hopefully, that will change. Yeah. I was wondering if at any point of time you or your company has misjudged how well a company will do. Yeah, the answer is yes. The one thing we know, and so the question was has our firm ever misjudged how well a company would do.

You're talking about on upside and downside? Let's just do upside, we're optimistic. Yeah, the one thing we know and I would say that we're probably wrong all the time because when these companies come in, they are so early. For instance, when they put up those financial projections, the one thing we know is they're wrong, right, they are either going to be better or not as good. To be fair, in most companies, it takes longer to achieve what that expectation - still could be a highly successful company, but I think the companies and the entrepreneurs early on tend to misjudge how long things are going to take. And then in our world like in life sciences if you have something like an FDA slowdown which we've had recently that can add time, takes longer to enroll clinical trials than we always think they do on paper. So it usually moves out a few years. Certainly, there have been examples, Google obviously. Google was the sixth or seventh search engine when they came to them, to Kleiner. Obviously our partners thought it was a special company but obviously you wouldn't predict that, that would be hard to do to your partnership. But there are many examples of ones that have done extremely well.

Sometimes it just takes longer than you expect. Yeah. How is the negotiation between VC and an entrepreneur work in terms of the pre-money valuations. Is there a whole lot of back and forth? It's great on our side - no. How does it go? I think you know - the fun thing about this, both I think for the entrepreneurs and for the VCs is every one of these dialogues is unique. Every single situation is unique. And it is, it's hard for the entrepreneurs. There's two stages of a venture that I think are extremely hard for entrepreneurs. Number one is those types of discussions with your quote putting in a value on their baby and their dream, right. That's hard.

But what most of the thoughtful entrepreneurs will do is they will talk to other entrepreneurs. They will go and talk to people and they will get advice from other entrepreneurs on how that dialog went, how you discussed that, how you want to deal with that person. The challenge is, for both sides is, you are talking about entering into a marriage for 8 to 10 years. I mean you have to think about it that way, right. So the negotiation should be careful on how that negotiation is and part of it really depends on are there other - is there competition. You know, one of the things that will affect the pre-money obviously of ventures is if there's 3 or 4 firms that are looking at that venture and all of them put in term sheets, that will impact the valuation a little bit. So I think it's a delicate balance between that. And really at the end of the day, if it's \$4 million or \$6 million or \$2

million or \$8 million, if it's a successful venture, that's really not going to matter that much for either party at the end of the day. Although, all of us have our belief sets on what - I have never been in a situation where we were excited about doing a venture and we didn't get there on valuation. Now there were times that the valuation just made it something we couldn't be interested in, but if it was in the range, we were always able to figure that out.

The second time it's really hard for founders - and this happens in a high percentage of companies including the most successful ones - there comes a times that that entrepreneur, because of his or her unique skill sets make them a great entrepreneur, don't necessarily make them a good manager, or leader, when the company gets to scale. And that's another time where you have to bring in professional management, the people that work for some of those big companies in many cases, to help scale the company to another size. Obviously, Google is an example where they brought Erick Smith and it's worked out great now that Larry's back running the company again, Microsoft, there's many, many examples of that. In most of our companies that happens at some point. The ideal situation is where you are able to keep the founder involved in the company, because he or she has all the passion, the people love to work with him, they tell the story better than anyone else. That's the perfect combination. That happens, maybe half the time you're able to do that. Sometimes that entrepreneur just doesn't want to work in a larger environment. And he or she might want to go off and found another company, which may be their passion to that. So those are the two times the discussions are the most difficult with entrepreneurs.

Now that second phase, I would be really upset if an entrepreneur didn't want to give up - wanted to give up their company, right. I mean this is their baby, something they worked incredibly hard for. So you want a certain level of friction. Obviously, you don't want it to be destructive, but you certainly want that. Yeah? Can you tell us a bit more about the type of relationships with the universities, certain universities? For instance with the OTLs, you have a direct link with the researchers... Yeah, sure. So the OTLs, we probably have less - we certainly hear from the OTLs, and Stanford does a good job, they'll send us a list of all the ventures and the IP that's there on a regular basis. But really where we would prefer to spend our time is where we do spend our time; is with the scientists or the physicians or the business people that are starting the company. Our world is entrepreneur centric. And everything we do should be focused on entrepreneur.

Now we develop that relationship with the entrepreneur, then we'll work with OTL to help get the technology out. But even there it's very helpful to have the entrepreneurs helping you in that process, because if you think of - the entrepreneur is the customer of OTL, right. We're not the customer of OTL, we're an important part of the ecosystem and OTL wants funding for the companies, but really we focus on either the clinicians or the scientist or the business people that have ideas, that's our core focus. Yeah? Can you talk a little bit about how you found the deals that you ultimately invested in? If any of those were over the transom, cold calls, or if those were all relationships from the past, or..? Yeah, that's a great question. So the question was, the ventures that I personally have invested in, wow did those come to me or how did those come to Kleiner Perkins? And second part of the question was, did some just come over the transom? So we get a lot of things that come over the transom. And there's a lot of people out there - they're bankers and they're called finders - that work with companies. And they play an important role. And they - what they do is they try to match your company with investors. The challenge with that is, I probably get five or six of those emails a day and so just take that number, just say you get 1,000 a year, it's literally that many, there's that many out there that you get. I haven't invested in one of those companies.

I'd only think I've taken a meeting from maybe one or two of those companies. So all the ones I have invested in have all come through other venture capitalists that I work with and know, or entrepreneurs or physicians or other people calling me or telling about it. Some people that I have just met randomly. At meetings in different places with an idea. Some cases where we see an area that we're extremely interested in and we go out and try to find the people, so we search the IP and other areas to do that. But nothing that's just come randomly over the transom. It's almost all come with some form of referral. And that's why I said so important, if you're going to go out and raise venture capital, to talk to all these resources you have around here in the valley, the people that know the venture capitalists, that have relationships, that have started companies, they're the ones that are going to get you in to see the venture capitalists. And never, if I have a recommendation from one of those type of people, will I not take a meeting with the company. So it's just the way it works and a lot of it is just the comfort we have in understanding where the company came from and the people.

Yeah? What do you think of the entrepreneur maybe getting a banker or two to help facilitate the deal structure? To - for the structure of the opportunity upfront? You know, it's really not appropriate at that stage. You saw, I mean literally that's what the cap table looks like. You know I kid people, you don't have to be a finance person to do venture capital because you can add, subtract and divide, that's what we do. I mean that's literally it, right. And so for early stage ventures a banker is probably not very helpful. For a later stage venture, maybe a banker maybe can help you think about how to present your company effectively. So let's say it's a later stage venture that's a few years - two or three years away from a capital market. There might be that. That said, there's - I have yet to see a banker involved with the company at the stage that we look at the, even if they're later stage. The bankers are calling us and they want to meet with the companies because they want to take them public someday, but the banker did not help put us together.

Now there are bankers that are helpful, that obviously see what's out there, they know what's coming, because that's their job also. And they'll meet with the company and they will call us and say 'we did see this company that's really interesting' but they're not representing the company, they're just kind of passing it on to us, more often. Yeah? My question is that the company is for who. I mean that the - I come from Japan and recently I feel there is some mindset or some people are thinking that the companies are for stockholders, or many people are now thinking about more company for employees or companies for society. I think after the earthquake Japanese people are thinking, changing that setup - mindset, more respect the servant. So could you give me a comment about that? Sure. You might - I lived in Tokyo for two years. So - and I was always struck by the opportunity that existed in Japan for more innovation. But as you know there, historically there has been a lot of regulation, so most of the physicians are public servants. And so a public servant is really limited how he or she can interface with private industry and I think that is - was one of the big challenges in life sciences on innovation.

I know that's starting to change and I know the government is looking at ways to drive innovation. But a lot of the things we talked earlier, that's important to have, you've got the great universities, obviously you have a technology, you have a lot of very capable people. But there hasn't been all the other parts of the infrastructure that we talked, there hasn't been as much venture capital, there hasn't been the ability, right, for the doctors and the scientists and the business people to work together on a regular basis. And so it's more the cultural aspects I think have been more of the challenge. Because certainly the talent is there, the technology is there and there just hasn't been the same support mechanism of the service groups in Japan. And I think that's starting to change. And it may be that change can start at the great universities, would probably be a good place. But I think that's why it hasn't happened. Yes? I actually have two questions. The first one is we see that MBAs are very common between - among venture capitalists.

Do you think that MBA is helpful for entrepreneurs? Second question is, you said that try to get the best advisor on your board. For first time entrepreneurs, what do you think is a good way to approach that, the people that you want to be on your board. Okay. Okay, so let me try to repeat all these questions. So the first one was around MBAs. Do you think an MBA - because a lot of VCs have MBAs - is an MBA important for an entrepreneur? I would probably say no. I think it's - it's a great - I have an MBA, so it's a great degree. It's helpful, because if you have a narrow background and let's say if you're one area of engineering or you an accountant and you want to broaden your view of all the different parts of business et cetera - and all MBAs aren't created equally, certainly here at Stanford and other places you get more of an entrepreneurial feel to it. I don't think you need that, because if you look at most of the people start these companies, I bet you would find very few have MBAs. They more would have PhDs or they're more science backgrounds or masters, probably fewer MBAs.

So I don't think that a prerequisite. Obviously, it's a great degree and if you want to do that and you're excited about it, it's a good thing to do. The second part of her question was really focused on who do you go to and how do you ask for help? I think in your set - and you've got a great opportunity; you have people like Tina and all the other people on your program that know many people in that ecosystem that I talked about. And I would talk to other people that start companies. I would cold call people, and just call them up and ask them, send them an email, ask them for help to do that. I would go to places where they are and just try to speak with them, trade a card with them. Again, I have found most people are very willing to help. What you probably want is you want advice and you want people that have done these kind of things historically, that can help guide you through that. And that's what I would do, nothing fancy. Yeah? I know that you deal a lot with science based companies, but what do you think the role of people who study humanities with any entrepreneurial ventures? And what level - how much of a team's composition can be made up of those? Sure.

That's a great question. So the question was really around, many people, what I've talked about, many people have technical degrees. And the question was, for folks that have humanities background, how that can be married with a technical background? I think that - first of all, I think there's - a combination of both is great. I think where - the reason why the companies start with those technical thing is they're normally solving something technical, right. It's either to put the software program and algorithms together or to put the product together or to put the molecule together. I mean there's a reason why it starts there, with the expertise around how to do that. In the first few years of these companies it's really spent on that type of work, remember I talked about the development phase of the company? And that's why many times the founders are those type of people. And they are the leaders of the company during those first few years, because you need that technical expertise to run the company. Obviously as the company continues to grow, having some other sensibilities and the balance in the company is extremely important. In most cases the company will never achieve what they want.

The founders also want their products - and a lot of their goals many times is to have a lot of people get their products. For me, when I was an operating guy, what really got me excited was not that the sales line was growing dramatically but the fact that that meant that more people were getting our technology, right. And I think that's how founders think. They're not going to get it there unless they have people with other backgrounds and other ways of viewing things. I think Apple's a perfect example and the more you'll read about the company. around the technical expertise, but also a sensibility around what people want. And in Issacson's book about Steve Jobs, it talks a lot about the marriage of that, having the very technical people, but just as importantly, the people that knew the personal touch and what people wanted in the user interfaces. So I think that marriage is

a really important thing. And I think, here at Stanford, you have many programs where you try to bring those different type of people together. And I think that the best is to have a multi-function disciplinary approach, is really important.

Yeah? What are some of the most common mistakes you see when founders pitch to you and how should we prevent those mistakes? Sure. The two that I mentioned is, one, balance. That they just don't talk about or appreciate the risk. Remember we're okay with risk, that's what we do, and we try to mitigate it, as Tina said. So I think that one is one that always strikes me. And the other is if they have three pages or three PowerPoint slides on the exit of the business, because that, for us, is not what we're thinking about when you come in. What we're thinking about is an exciting idea focused on a big market with a big vision. That's what we want, right. We're not now - well we think about that once you leave the room and we talk about it, we'll do that pattern matching and we'll say, 'yeah, that technology was novel, they have IP.' It's 'there's a large existing market that's growing' or 'big potential market that's growing there.' 'These people are awesome and they're going to attract great capital.' 'Yeah, this is the kind of things that the big companies are interested in that they don't have themselves.' we'll do that. But I don't think that's the entrepreneurs role to do that.

The entrepreneur is to really pass on and transmit the excitement about his or her idea, the company, what the company can become and get people excited about that idea. Yeah? So, you come from a background with a - in political science. You were a White House fellow and now you are... Woah, woah. Oh, no that was my dad. Oh, sorry. That's okay. I would have been happy to do all those things but... So you're investing now in high-tech companies especially Internet companies. Sure.

Just debating right now is Hr 3261, The Stop Online Piracy Act. I don't know if you have any thoughts on that? I'm not familiar with it. Okay. No. So what - the issues we deal with, with a lot of our companies are HIPAA, right, security issues and privacy issues. So we spend a lot of time focusing on those with many of the healthcare IT companies, but not that issue. Okay. Yeah? So I'd be curious to know, are there any supposedly hot areas for life sciences where you personally just don't have any interest in, or a little bit and you're seeking contrary views? Sure. You mean areas that we're not interested in but others are excited about or..? Apparently there's a lot of interest in, but your firm is just not interested in-? Sure. So the question was are there other areas of life sciences that there seems to be a lot of interest that we may not be that interested in as a firm.

Our interest is somewhat driven by our individual backgrounds. So if you look at a venture capital firm, in our life science group, so we have someone like me has a lot of operating experience, focuses on devices, we have some - Brook Byers has focused historically on some devices, but diagnostics and electro-diagnostics. Beth Seidenberg an MD who ran development at Amgen. So she focuses on pharma and biotech. And so you could see our universe there. And the only difference outside of those three is really in the IT side, where we are now - healthcare IT historically, if you look at venture returns, has not been nearly as successful as devices and biotech. Now, we believe that's going to change with these IT-enabled services like I talked about. And because we have other partners that focus on mobile and the Internet and consumer businesses, we believe there's some really exciting opportunities there. We haven't found a lot of what we like yet because the business models are a little bit unproven and the healthcare consumer's a fickle consumer; we consume healthcare differently than we consume other things in our lives. And so that's formed our universe.

I would say if you look at where healthcare investing's going, most of it sits under that umbrella that I just described. So I don't - now, each firm may have a different thesis on how they want to participate in devices or how they want to participate in diagnostics. That certainly could happen. But I don't think there's any totally contrarian kind of areas. Yeah? Last question. I've got a question, you talked about network being so important in finding deals and finding different entrepreneurs to connect with. How do you keep your active network? And like down to specifics, do you google contacts, do you have your database, how you do that? And how do you really stay active in your network when it keeps growing larger and larger? Sure. So the question was about, we talked a lot about network and having the active network and how do you do that? I think all of us do it differently. When I was talking about that, my - our networks we just continue to build and we don't have any fancy way that we manage our network. So we don't have a social network we build around our networks, I think it's really just simply things like contacts and continually touching base with people.

What I was talking about for the networks for entrepreneurs, and for people that potentially want to be a VC down the road, that's a network of just staying current and in front of people and meeting with people and being quite frankly at the right place at the right time, as I mentioned before. So I think your - this generation represented in this room, does a much better job in networking than my generation did coming through. And I would just keep those networks as active as you possibly can. Because as I mentioned before, these opportunities, whether it's an entrepreneurial opportunity or investment opportunity, are very organic and present kind of out of phase. I hope you will join me in thanking Dana, this was totally terrific. Thanks. Thank you.