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Opalesque European PE & VC Roundtable

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Editor’s Note

Venture capital has enjoyed a compound annual growth rate of 17% for the past five years and is projected to reach $1 trillion, making up then about one-third the combined PE and VC assets globally.

However, this type of growth is not coming without challenges and disruptions as the startup ecosystem has changed significantly in recent years, with a lot more financing available. For several reasons, **many incubators and accelerators are losing access to a good deal-flow.** Critics say they all tend to offer the same commoditized program that brings little value to the companies and can't attract the best projects as there are other financing options for the entrepreneurs. **New types of startup generators** (pre-team, pre-idea) like Demium and Antler are coming forward with a new approach creating deal flow from the beginning. So, instead of competing for the deal flow, they build it internally through elaborate programs and are then able to own and then to commit to their startups so that they can perform better.

According to a large benchmark study, **92% of startups fail within the first three years.** Of those who failed, 74% failed due to premature scaling, meaning spending money on marketing, hiring, etc., before you found and excecute a working business model *(this Roundtable also discusses 14 factors that have been found to determine success or failure of a startup.)* Meanwhile, Demium, for example, has built 81 companies from scratch with a 71% survival rate, meaning that after three years they are still alive. The mission is to create a new approach and asset class or category in the industry and also institutionalizing entrepreneurship as a career path for a wide range of people.

Private equity ripe for Vanguard-style disruption while investments in sustainable technologies become mainstream

PE is also increasingly important, but for wider participation, the asset class requires innovation on how to access it beyond the current playbook. *Crowdfunding platforms could become the new private stock exchanges, and fractional ownership offered through blockchain a major game changer.*

Tokenization will become a key component in finance, although flows and investments in digital assets/crypto/blockchain projects are still slow It's a new asset class, so most investors are still struggling to understand the space which broadly is divided between token investments based on decentralized protocols and projects, and equity investments where VCs and other investors invest in companies supplying services and infrastructure to the blockchain industry.

One of the biggest excitements in sustainability is how over the past ten years technology has been coming through from the private markets to the big capital markets and thus scaling up in size and significance to enormous, previously unthinkable levels. Ten years ago, offshore wind was barely growth capital in private equity, and now it has transitioned and matured going to mainstream infrastructure development, and further to a yielding asset class. T*his trajectory of maturation and penetration is now reaching other technologies as well.*

The Opalesque 2019 European Private Equity & Venture Capital Roundtable, sponsored by WTS Global, took place in London with:

1. Robert Welzel, WTS
2. Jim Totty, PhD, CFA, Earth Capital
3. Philip Cottier, PhD, L1 Digital
4. Rupert Novis, Kinled Investments
5. Gala Gil Amat, Demium Startups
6. Lars Kvaalen, Antler

The group also discussed:

- Why starting a firm with your friend or college friend may not be the best idea (page 18). Where non-professional VC investors usually fail (page 9)

- Valuations and capital raising in VC/PE and blockchain technologies (page 22)

- **Intelligent deal flow screening:** Three filters can reduce deal flow from many hundreds a year down to a few tens (page 19). How to select crypto fund managers and blockchain projects (page 19, 24-26)

- **Growth** (page 14) **and limits** (page 16) **of the secondary market.** Co-Investments: Set-up, limits, and downsides (page 27-28)

- What does Brexit mean for the UK VC industry? How will changes in the economical changes affect VC? **What is the value add of a venture capitalist?** (page 20-28)

- Is Corporate Venture Capital (CVC) actually working? Who has the greatest risk in CVC? (page 21)

- Are fund structures necessary in the age of blockchain? (page 15)

- **Three domains where Blockchain is already changing the lay of the land** (page 12). **Smart contracts for asset management** (page 9)

- **Outlook:** How organoids, robotics, and machine learning are exponentially speeding up the rate of discovery in medicine (page 13). Why fintech and longevity excite family office investors. What's hot in sustainable VC and PE

Enjoy!
Matthias Knab
Knab@Opalesque.com

Participant Profiles

(LEFT TO RIGHT):

Dr. Jim Totty, Dr. Philipp Cottier, Lars Kvaalen, Matthias Knab

Rupert Novis, Gala Gil Amat, Robert Welzel

Introduction

Dr. Jim Totty
Earth Capital

I am Jim Totty from Earth Capital. My professional background started in the '90s in sustainable technology and then advisory at PwC before moving to private equity, at Citi and then this decade with Earth Capital. Earth Capital is part of Earth Capital Holdings, founded by Stephen Lansdown, co-founder of Hargreaves Lansdown, and Gordon Power with $1.6bn in AUM. Our latest fund, the Nobel Sustainability Fund®, has been cornerstoned by Stephen Lansdown, Gordon Power and the Monaco Constitutional Reserve Fund.

Our investment focus is sustainable impact private equity, including themes like food and agriculture, mobility, renewable energy, energy storage, water technology and related areas around sustainability. Earth Capital has been following this sustainability-focused approach for over ten years.

Lars Kvaalen
Antler

I'm a partner at Antler, a global VC firm and a startup generator. Before setting up Antler in London I was at McKinsey in Norway where I spent a bit more than six years. I traveled and worked across different industries, but ended up focusing on telecom, mainly on the technology and M&A side. I started my career quite late, as I had a first career as a professional athlete in speed skating, where I was part of the Norwegian National Team. That was my life until age 24 when I decided to change course and rather finish my studies and get on with my real life.

Let me explain what I mean by that Antler is a **startup generator.** Instead of competing for the deal flow, we build our own deal flow through our programs. We run a 6-month program where we take on aspiring founders, individuals, who we believe are very capable of building a business but haven't done so yet. Typically, these are people with 5-15 years of working experience. The first two months of the program are about forming teams and ideas, after which we invest in those teams that we believe in. We then work with them for another 4 months to help them build traction, build their MVP, get the first customers and raise a seed-round.

We started first in Singapore in 2018 where we ran the first program and have expanded to Stockholm, London, Amsterdam, Sydney, Nairobi, New York launched yesterday, we will launch in Oslo in January next year and more locations going forward.

Matthias Knab: Could you describe Antler as an incubator?

Lars Kvaalen: We like to call ourselves a startup generator because when we recruit, we recruit individuals. Incubators, accelerators or any early-stage investor place their bets on a given combination of team and idea – the team might be great and the idea might be medium, or vice versa. We make sure that all the people who join our programs are great (~3% acceptance rate) and then help these people develop strong business ideas with real validation. That way we make sure we always invest in great people with great ideas.

Investing £120,000 as an institutional investor requires a certain scale for it to make sense, and that is why we are saying that we are in many ways creating a new asset class.

You can also argue that we are to some extent **institutionalizing entrepreneurship as a career path.** If you look only 10 years back, if your plan was to become an entrepreneur people would think you were a bit crazy. The typical dream was to join an investment bank and maybe move on to a hedge fund, or join a management consultancy.

Today, becoming an entrepreneur is considered less crazy, but most people would still benefit from having an ecosystem to support them. Antler creates this new option that allows you to say, "Okay, I'm an exceptional individual and I want to start a business. Should I develop my own idea, find my own co-founder and look for funding myself? No, I join a system where I will meet with other exceptional individuals, I will get help in developing and validating business ideas, and the path to the funding is very clear as well." We are democratizing entrepreneurship.

Dr. Philipp Cottier
L1 Digital

My name is Philipp Cottier, I am Chairman and co-founder of L1 Digital in Zurich. We set up L1 Digital last year as a specialized investment advisor focused on investments in the digital assets space. The first product under advisory mandate is a multi-manager fund investing in the best crypto and blockchain funds globally.

In terms of my background, I spent 25 years in the financial industry, starting with a Ph.D. in Finance and about five years in banking for UBS in Switzerland, the US, and Asia. We then grew Harcourt, a firm doing funds of hedge funds, to $6bn AUM and exited it to Bank Vontobel in Zurich.

From the proceeds of this sale, I built a family office investment structure called Bellegarde Capital through which over the last ten years we invested mostly in VC, fintech, emerging markets, and impact. In 2015 we started investing in blockchain, first via tokens and funds, later also in directs. We built so much conviction in the space that last year we decided to launch L1 Digital as a separate structure exclusively focused on crypto and blockchain.

Robert Welzel
WTS Global

My name is Robert Welzel. I am a tax partner at WTS Global in Frankfurt with a consulting focus on international tax and regulatory issues. WTS was founded in 2000 in Germany as an independent tax consultancy triggered by the intention of the tax department of Siemens. The company developed rapidly. At present, our headcount in Germany is approx. 1.000, and the international tax network of WTS Global worldwide exceeds already 3,000 consultants.

Our main focus in Germany is tax consultancy and tax compliance for large corporations, both DAX and "Mittelstand". **These clients are expanding their investments in private equity and alternatives.** Our unique business partnering model constitutes de facto the in-house tax functions of corporations. We are expanding this business model not only in Germany but also on a worldwide basis.

WTS Global serves both major private equity houses and big institutional clients to manage cross-border tax reporting needs. The WTS Global service offering may be of interest for private equity houses intending to strengthen their international investor basis, too. Seamless cross-border tax and investor reporting should support the distribution of private equity and venture capital funds. WTS Global's bottom-up granularity methodology approach which is based on capturing and analyzing the economic data of the underlying target investments of the alternative funds provides for the realizability to adapt and facilitate the e.g. partnership, CFC-alike tax compliance reporting needs of any envisaged jurisdiction in a scalable and economically reasonable approach per investor. Applying a reasonable fee estimation reflecting the complexity of the specific alternative funds would bolster the economic scalability of any global fund marketing strategy especially in the institutional investor sphere.

Gala Gil Amat
Demium

I'm Gala and I work at Demium. We are **pre-team pre-idea** startup incubator, thus we look for a talent and then, with that talent, we build companies from scratch. We identify extraordinary local talent, match it with a perfect co-founder to build solid teams and match it with a business idea and then connect it to a solid network of investors.

We organize every two months an event we call "AllStartup" in each one of the incubator hubs that we have. At the moment, we have 11 of those in seven countries: Spain, Belarus, Ukraine, Poland, Hungary, Greece, and Portugal, we are in southern and eastern Europe mainly. Until now we have built 81 companies from scratch with a 71% survival rate, meaning that after three years they are still alive.

At the moment we have over 100 companies in incubation, so we are a substantial generator of startups. Compared to Lars' firm Antler, we tend to have a different geographical focus, at least for now, as we believe great companies can come from anywhere. The cities we have selected all have great tech and/or business talent, but very little competition for that talent at the startup level. The talent is more affordable and therefore starting a company is more efficient. This allows us to benefit from lower valuations.

I am the Investment Manager here in our investment hub in London where we actually do not incubate but raise capital for both Demium, the parent company, and help our startups raise capital.

On the personal side, I have also run my own startup. I studied at Stanford and have co-founded a company there which I was running as the CEO. The company didn't work out as planned, so I had in a way a classic startup journey. I then decided to come back to Europe where then Demium recruited me, and I have been with them since.

Rupert Novis
Kinled Investments Ltd

Rupert Novis. I work as a Director for Kinled Investments Ltd, a single-family office based in London, Switzerland, and Hong Kong. We have a portfolio of venture capital stage businesses across three different sectors. Firstly medical – medical devices, some life sciences, and Med Tech; the second sector is technology and fintech, where we have a variety of companies and the third sector is real estate and high-end goods. We spend the majority of our time on the first two.

We invest in companies, help grow them and take board seats or advisory roles. In addition, as companies require further capital rounds, we have a strong family network where we invite others to invest alongside us, thus helping our portfolio companies all the way through their life cycle.

Our geographical focus is in Europe, North and South America. At any one time, our portfolio typically has between 30 and 40 companies. We have had around 10 IPOs and many other trade sales, and of course, some of the firms also didn't make it, which, as Gala already pointed out is part of the game in venture capital.

My personal background started initially in the British Army. I then spent 16 years in the city sales trading derivatives with Metallgesellschaft, Enron, SocGen and RBS, then went to run the UK arm of a commodity hedge fund, followed by running my own business working closely with a number of hedge funds. I also spent some time in a consultancy focusing on family offices and intergenerational change within the family businesses. I then joined Kinled where together with the principal we are managing a large portfolio of companies with a small team.

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Matthias Knab Venture capital has enjoyed a compound annual growth rate of 17% for the past five years and is projected to reach $1 trillion, making up then about one-third the combined PE and VC assets globally.

We see a lot of activity in Asia. AUM held by North America-focused venture capital funds stands at $397bn vs. $323bn for funds targeting Asia.

Just five years ago, North America-focused venture capital AUM ($241bn) was well over twice that of Asia-focused venture capital AUM ($72bn), and, of course, China is behind that phenomenon.

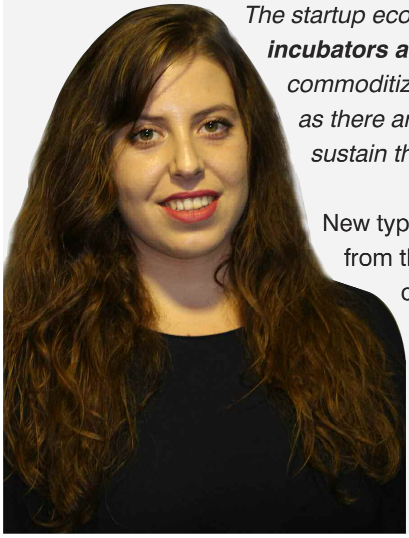
On the other hand, things like fees are becoming an issue. You see headlines like, "Private equity is ripe for Vanguard-style disruption."

How does the VC and investment world look like from your perspective?

Rupert Novis: One thing I have noticed over the last 5 years is a much greater participation from different types of investors in alternative investments.

When you look at the allocations of families or institutions, their percentage in alternative investments has significantly increased, thus resulting in a much greater amount of available investment money. Asset allocation continues to flow into private equity and venture capital, while allocations to hedge funds have become static or reduced.

Gala Gil Amat: Correct, there is a lot of capital available to the point that in some places money has become almost a commodity. I, therefore, believe that we have to bring much more value to capable founders than just capital. This is why apart from capital and finance we also look at how we can really help them to survive and to thrive as a startup, for example by providing them with the right legal and the hiring advice.

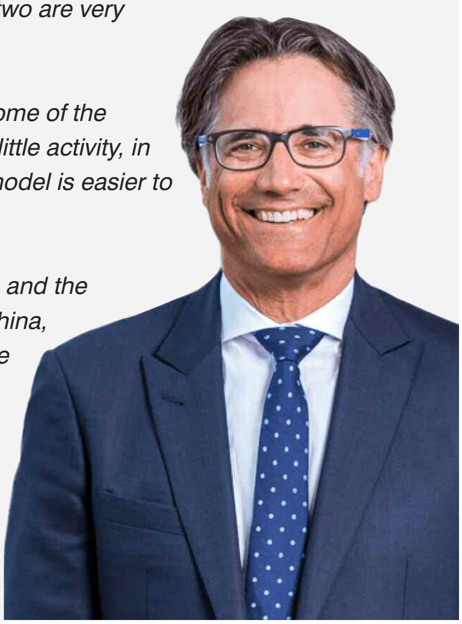


The startup ecosystem has changed significantly in recent years, with a lot more financing available. ***Most incubators and accelerators are losing access to a good deal-flow.*** *They all offer the same commoditized program that brings little value to the companies and they can't attract the best projects as there are other financing options for the entrepreneurs. As well, venture builders are not able to sustain their model, with founders given low equity into their startups and feeling like an employee.*

New type of players like Demium are coming forward with a new approach creating this deal flow from the beginning, so we are able to own it, and then to commit to these companies so that they can perform better.

I agree with Lars that this is a new approach, a new category in the industry that is thriving. Thus, it's not only about capital, which as we said is readily available at the moment, but capital is not the only matter for startups and for companies.

Dr. Philipp Cottier: **People talk about this wall of money, but we don't really see it in digital assets yet.** It's a new asset class, so most investors are still struggling to understand the space. Essentially, we need to *distinguish between token investments based on decentralized protocols and projects, and equity investments where VCs and other investors invest in companies supplying services and infrastructure to the blockchain industry, and these two are very different.*

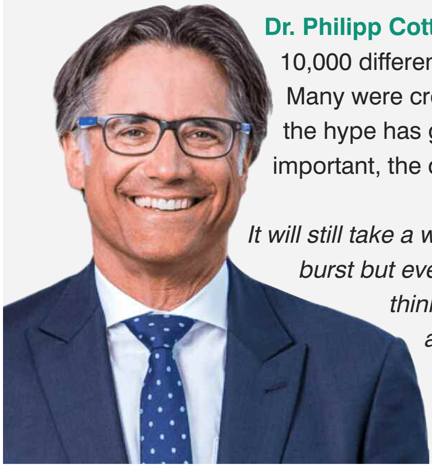


So far from the VC side, there has been only little money entering the space – mostly some of the typical brandname tech VC shops from the US West Coast. In Europe, there's still very little activity, in Asia we do see a bit more. Of course, from the perspective of an end investor, the VC model is easier to approach because investors are already familiar with the VC model.

The token space is very different. Here so far we have hardly seen any VC activity at all, and the money has mostly come from crypto-entrepreneurs and retail investors in places like China, US, Korea, although now we see the first hedge funds and family offices moving into the token space.

The fund we advise has just received the first ticket from a pension fund, and we are very proud about that, but you can see it's still early-stage. It's not like there are billions of dollars moving into the space right now. But there will be, it is clearly picking up.

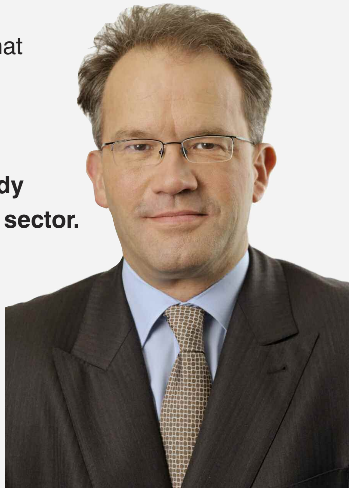
Matthias Knab Philip, in your space of digital assets, as well as in VC in general, it all comes down to the quality of the projects, teams, and companies. What can you share with us when you're looking into the digital asset space – so both as equity and token investment – from your perspective as an early investor?



Dr. Philipp Cottier: The first thing we have to deal with is the sheer quantity of projects. There are over 10,000 different tokens, of which about 2,500 listed, but most are really low quality and will not survive. Many were created at the top of the Bitcoin hype in 2017/2018, but now that money is more scarce and the hype has gone away, it is all about team and project quality. Then, token economics which is super important, the developer community around the project, and of course user adoption.

It will still take a while to wash out, similar to what we had back in 1999/2000 when the dot com bubble burst but eventually we saw firms like Amazon, Tencent, Google and Facebook emerging from it. We think that the same thing will happen in the digital asset space, but right now most projects are still of rather poor quality.

Robert Welzel: Based on our own experience and expertise, WTS built a **minimum viable product on blockchain together with IBM** to demonstrate that tax solution might provide for additional - ancillary - value add-services for many emerging blockchain ecosystems.



Blockchain connects market participants, unifies and automates processes and delivers trust and transparency. As a true ecosystem, it provides the capabilities to implement trusted tax services that perform compliant tax calculations and tax settlements for each transaction in real time and at competitive costs.

Tax authorities can automatically trace all settlements and verify their compliance. **WTS has already developed prototype smart contracts to support tax related tasks for the asset management sector.** We intend to build a minimal ecosystem and invite the Ministry of Finance of different jurisdictions together with other market participants and consultants to join as a stakeholder in these new ecosystems. Tax sandboxes mirroring the already advanced regulatory developments might be the most effective tools addressing the complex tax issues, especially defining an international taxonomy, a thriving building block for any integrated smart contract solution.

Lars Kvaalen: *Surely there is more capital being allocated to alternative investments. What is less clear is whether that money is being deployed into quality deals. Many early-stage investors prefer direct deals over investing in funds, fees might be one of the reasons, but I am not convinced that's the right strategy for most investors.*

I'll give you a small anecdote. If you put money into a hedge fund, which invests in public equities, you trust them your money because you think they will outperform the market due to better deal flow/access, more information or just being smarter than everyone else.

A similar logic applies to private equity, it is about trying to be smarter than the market, and also the need to pool together capital if you want to buy into the big deals – most investors don't have that required capital on their own.

Then, in the early stage startup space, many investors see that they can on their own deploy ticket sizes that give them access and they can get quite excited over specific deals, feeling like they've discovered a treasure. They often don't consider the importance of things like; having experience in what to look for and how to do a DD on an early-stage company, the general information asymmetry in the startup space compared to more mature assets, and portfolio diversification – outliers are typically what drives portfolio returns in this space.

But coming back to the investors, we see a trend of venturing into alternative investments. Philip mentioned a pension is investing in L1 Digital for the first time, and on our end at Antler, we also have been able to get a few pension funds on board. Pension funds don't invest in direct deals themselves and need to work with other funds, and we see this as a big opportunity going forward.

On the retail side, the main drivers in the UK are the Seed Enterprise Investment Scheme (SEIS) and Enterprise Investment Scheme (EIS). With SEIS you can claim back up to ~75% of the investment on your taxes, so the government basically makes up for your poor investment decisions. This has created a great environment for startups who want to raise money from individuals, but it creates weird incentives when investors think more about offsetting taxes than making good investment decisions.

Things like this definitely create more deal flow in the market, but it can be questioned whether it creates more good companies and if it's the best way of spending taxpayers money.

Dr. Jim Totty: I will be adding some thoughts and observations from the sustainability perspective.

Looking at private markets, what's particularly interesting to see and analyze is how some major global industry sectors have become under threat from the coming sustainable revolution, as Al Gore calls it. To pick just one example, let's look at the auto sector. Now, electrification is pretty disruptive but actually, automatization might turn out to be the death of the traditional auto sector.

We will see significantly increased vehicle utilization in 15 or 20 years' time. The number of vehicles on the road in cities particularly is going to fall significantly. The whole model of things like driving and owning a vehicle that's mostly parked outside your house will within 15 years or so be gone in cities and a bit later outside in the country. The oil and gas industry is facing similar challenges, and we can see that a lot of the oil majors are now trying to turn themselves into power companies because they can see their fossil fuel business will be dying in 15 or 20 years. Or maybe they have to do good bank / bad bank splits and put the old fossil fuel business on one balance sheet at one cost of capital, and all the new shiny electric stuff on another balance sheet. Maybe that will come in a few years' time as well.

So that's just one example of whole sectors facing existential crisis. It is a very exciting time to be investing in sustainability in the private markets. For example, if you are doing ***impact investing with a pure-play strategy*** *– we invest in small SMEs as small as 10 to 30 employees – these companies have direction and purpose and intent to their impact.*

<u>With those types of fast-moving strategies, we can make progress and exit to those large strategic corporate buyers in relatively short time</u>. Shell and BP are examples of such firms doing trade acquisitions pretty much every week at the moment, much more than they were doing only a few years ago.

On top of that, the ability to access the public markets now for sustainable and impact businesses has become greater as well. We saw the UK Energy Efficiency Investments Fund floated at the end of last year. It was a £100 million IPO, and was the first vehicle taking energy efficiency into the listed equity markets. It's now a 'yieldco' investment trust in the public market. This is an example of the great exit opportunities that are now opening up.

The final point we'd make for alternatives and particularly private equity is that we have now a lot of <u>evidence across all the asset classes of impact and ESG strategies outperforming.</u> On the listed equities side we are seeing asset managers like Robeco, or MSCI on the data side pulling together a lot of evidence now of outperformance. On the private markets side we see the top managers, including Earth Capital, producing track records that are ahead of BVCA industry historic IRR's with impact strategies. Even in fixed income, we are seeing now green bonds pricing a few basis points tighter than their non-green peer groups in things like mortgagebased securities which again didn't happen three or four years ago. Summing up, we see our whole investment ecosystem from the private markets through our exit routes into public markets outperforming, and this makes it a very exciting time.

Now, the flip side of that coin is still of **lack of standardization** in the private markets of how we define and how we measure impact. Of course, the one thing the capital markets require is nice standardization and well-parameterized products. We have not delivered that yet in impact investing. This will impede the flow of money into impact strategies until we fix that. But actually, the private equity community in impact investing understands that problem. We are going to take a couple of years to fix it, but we will fix it. And then we think we will see a wall of capital coming into the sector, and so even more exciting times to come. At Earth Capital, we have our own in-house sustainability measurement tool called the Earth Dividend™, which provides an annual measure of an investment's Sustainable Development impact.

Matthias Knab Will the taxonomy for sustainable activities the EU has started to develop help?

Dr. Jim Totty: They shouldn't overcomplicate it, as over-complication is not a smart thing to do. Again, the capital markets like simplicity.

I'm sure 40 years ago the early swap agreements were fully page by page negotiated documents. But now you just fill out a few parameters on the front. Or when you take out a mortgage at home – it's, again, a thick document but it's really just a few numerical parameters that define your mortgage, and then that can go through into the debt capital markets.

We are not there yet in sustainable impact investing and how we parameterize and define impact. But for us to get to the same point and access the big capital markets, I think there are two or three years of work still to do.

Rupert Novis: Just an observation, it used to be a perceived advantage to have an impactful eco-friendly approach within a company.

Now, it's a clear disadvantage to not to have one. So, the tide has changed and it's now considered to be a required element you must have within your group. I think that's very positive for the industry.

Matthias Knab How are you from the venture side looking at impact and sustainability?

Lars Kvaalen: For me, this question has two dimensions:

1) what we as an investor want to invest in, and

2) what our founders want to build, since we do not dictate what they should build.

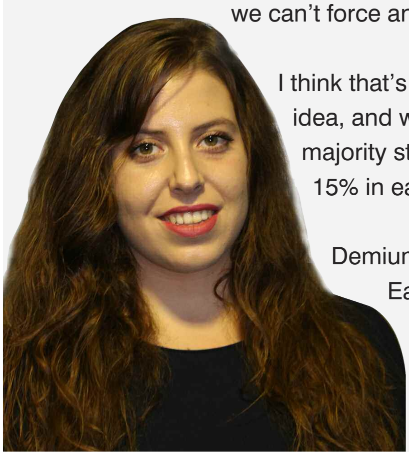
The first one is about potentially setting boundaries to our investment scope. We have a very broad investment scope and can invest in any kind of tech-driven business, but only as long as it has some positive impact on society – this is not very restrictive for us.

On the second dimension, and maybe more importantly, I find it interesting to see that the aspiring entrepreneurs that I work with and meet really care about the impact of what they are building. I definitely see a trend of more purpose-driven startups.

Gala Gil Amat: Also at Demium, we are very aware of impact investing and how crucial it is and through our companies, we have deployed capital in this area.

However, for our overall program, we are sector agnostic and the founders can obviously choose to what extent they want to be on the impact side. But when you actually look at the people who actually got through our programs – as mentioned, we do six batches per year in each of our 11 incubation hubs, we are amazed to see how many of them have impact in their scope. An example that comes to mind is that several have done marketplaces in ecological food.

We can say that there is a quite high awareness in the entrepreneurial community and society that we have seen transmitted to our founders as well. However, as I mentioned each one of the entrepreneurs is free to choose what they want to work on, we can't force anyone.



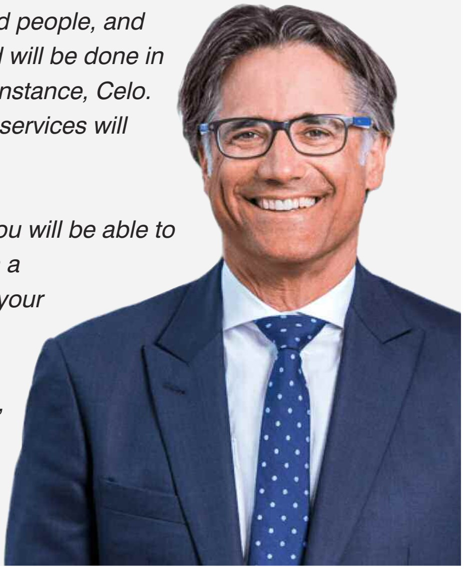
I think that's a very clear distinction from what traditional venture building which was like, "We have this idea, and we want to make it big, and we are going to find three people to run on it, and we'll be the majority stakeholder in the company." So for us, it's the other way around. We take a minority stake of 15% in each company, letting the founders have the majority.

Demium uses a unique in-house methodology to ensure each startup has higher odds of success. Each founder has specific complementary skills and each idea is tested and validated. All teams work directly with experienced entrepreneurs throughout the program, in our own coworking space.

Dr. Philipp Cottier: When it comes to sustainability and impact, cryptocurrencies are often criticized for not being very energy efficient. That is mostly related to bitcoin which employs a consensus mechanism called proof-of-work, where the miners use a lot of energy. This is certainly a huge energy waste even though probably two-thirds of the energy used is renewable. But anyway, the important thing is that the industry is moving in the right direction given that most of the new generation blockchains are moving from proof-of-work to proof-of-stake, which is more like a voting system and doesn't use any energy. So, **cryptocurrencies' energy consumption will improve substantially over time.**

What is more interesting, however, is that we see lots of projects in the impact space where blockchain technology and cryptocurrencies will play very important roles. I'll give you three examples.

*One is **financial inclusion** in the emerging markets. Today, you have 2 billion unbanked people, and blockchain will change that. International remittances will become extremely cheap and will be done in a decentralized way, phone-to-phone. There are a couple of projects in that space, for instance, Celo. We will see the same thing with domestic payments, lending, and borrowing. Financial services will become accessible to everyone. That is a big impact.*

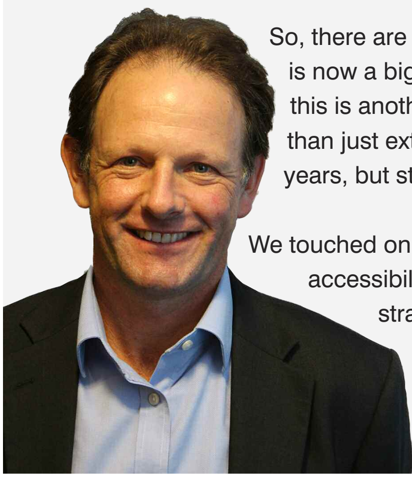


*The second example is in **renewable energy and CO2 compensation.** In the future, you will be able to trade renewable energy, for example, solar energy that you produce on your rooftop, in a decentralized way with anyone in the world, so you will no longer be forced to sell it to your local utility.*

*The third example is **data protection.** Today we have these giants – Google, Facebook, Tencent – who are taking our data and doing whatever with it, with the result that we have no more control over our data. This will change in the future within the* *decentralized space where everyone will be able to anonymize their own data through cryptography with hashed public keys that are KYC-ed, but no one knows who is behind the data. We will be able to better protect our own data, and we will decide whether we want to sell our browsing behavior data or not, whether we want to watch advertising and be paid for it or not, et cetera. So, the consumers will reclaim power over their own data, which in itself is a very significant impact.*

Rupert Novis: The three sectors Philip mentioned offer very attractive opportunities. We also see exciting **opportunities in medicine.** Today the rates of discovery and change are phenomenal.

For example, one of our portfolio companies in San Francisco, System 1 Bioscience, uses organoids to discover new drugs for brain disorders using a data-driven phenotypic approach in intact human neural systems. **The combination of organoids, robotics, and machine learning is exponentially speeding up the rate of discovery for central nervous system diseases.**



So, there are many fascinating themes and developments across all medicine, and, of course, **longevity** is now a big topic too. We'll see how that really works out, but we are all living a lot longer anyway, so this is another very exciting area. The key here is to live a healthier and fully active life for longer rather than just extend life. Currently, the average age people start to become ill from old age diseases is 62 years, but still live to 82 years.

We touched on **fintech** earlier where we see similar opportunities. Jim mentioned the ease and accessibility of getting mortgages. Finance for the consumer, in general, has become a lot more straight forward and user-friendly. A lot of newcomers such as Zopa, Tide, Habito, Revolut, Monzo, Oxygen Finance have made significant progress into parts of the banking market where the traditional banks have failed to show interest or deliver since 2008.

Dr. Jim Totty: *One of the biggest excitements we are seeing in sustainability is how over the past ten years technology has been coming through from the private markets to the big capital markets and thus scaling up in size and significance to enormous, previously unthinkable levels.*

To give you one example, ten years ago, **offshore wind** was in early development with a few wind turbines off Denmark and the eastern coast of England. Now, we're seeing it in the capital markets at the billion dollars scale. Just last week, we have the latest CfD for British North Sea wind price at £40 per megawatt-hour which is an astonishing price level more than two times cheaper than the new nuclear plant at Hinkley Point. You can see how that technology has made it through on price and into the capital markets. Ten years ago, offshore wind was barely growth capital in private equity, and now it has transitioned and matured going to mainstream infrastructure development, and now further to a yielding asset class.

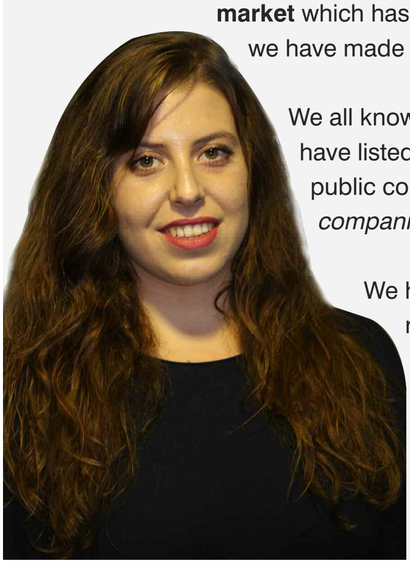
And so this **trajectory of maturation and penetration** is now reaching other technologies as well, so it is very exciting to see what asset classes are following. **Electric vehicle charging infrastructure** is clearly going down the same road. Today, electric charging infrastructure is still a growth capital private equity risk play with significant risks like utilization risk that need management. But we can all see that it will be yielding infrastructure in a few years' time.

I think for me, the most exciting sector is **food and agriculture.** We have a global population heading towards 10 billion. At the same time, we all eat 30% more calories per day than we did 50 years ago. In addition, 20th-century solutions no longer work in agriculture.

In the 20th century, if you had a problem on your farm, you just threw fertilizer on the fields, or insecticide or herbicide – lots of chemistry, mostly fossil fuel derived and frequently toxic. That's not the way we are going to farm in the 21st century. **Sustainable fertilizer production** is one of the hottest areas in venture capital at the moment.

We also have huge numbers of startups active in drone technologies, new protein technologies – whether it's growing artificial meat or growing vegan protein – or supply chain management, hydroponics, etc. It is in these areas where we see the fastest growth, and our Botswana agricuture business Noka Farm has employed in excess of 100 people locally since our involvement. Food and agriculture is certainly the fastest growing sector of my deal pipeline, and I don't think it will take too long before it takes the top spot in terms of deal flow and value of deals that we are seeing.

Gala Gil Amat: Going back to the capital markets themselves, what excites us at Demium is the **growth of the secondary market** which has become a booming market. It's a strategy that Demium has pursued this and last year, so we have made partial cash-outs for some of our startups.



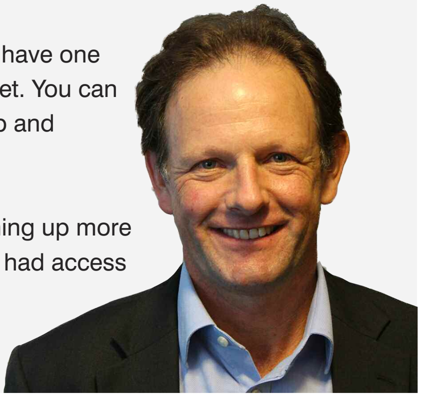
We all know that companies go public at a much later stage now. While in the past a company may have listed in five years, now it may take ten to twelve years. More companies also stay private, or a public company may delist and become private again. *But people still sell and buy shares in these companies, and so there is a very attractive secondary market happening.*

We have taken advantage of that and do sell partial stakes in our startups, creating a stream of revenue for Demium as well. I also believe that we will see more of that as platforms like Seedrs are already offering this possibility of buying secondary offerings. A lot of venture capital firms are interested in buying these deals. As I said, the secondaries market will keep growing, and on our side, we have already doubled the volume we have transacted in secondaries last year. This trend is going to stay with us for a long time.

Matthias Knab I want to read a quote that I copied from Towers Watson Thinking Ahead Institute's report on private equity: *"PE is increasingly important, but for wider participation requires innovation on how to access it beyond the current playbook."*

The authors mentioned two things that you could play a role in the future. Number one is crowdfunding platforms that could become the new private stock exchanges, and secondly, fractional ownership offered through blockchain technology.

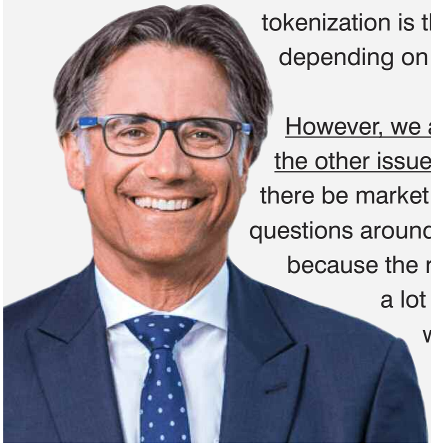
How do you see this playing out? How can the private capital industry grow beyond the current playbook and become more efficient to offer more access, reduce friction, offer more participation?



Rupert Novis: I would agree that there's a need for democratization and better access. We have one portfolio company called Bricksave, which specializes in crowdfunding in the housing market. You can invest in a building in prime residential locations by buying a very small fractional ownership and receiving the proportional yield and ultimate sales proceeds.

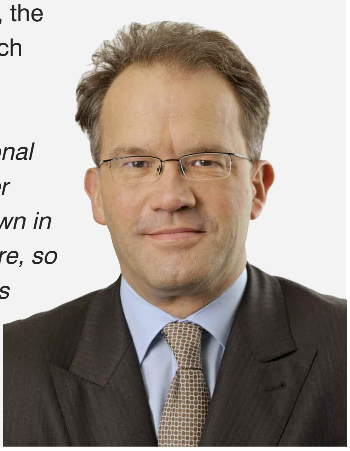
This approach has the potential to become more widespread across different sectors, opening up more opportunities for consumers to participate in investments that they wouldn't otherwise have had access to.

Dr. Philipp Cottier: **Tokenization** is a major trend and will play an important going forward. You can basically tokenize any asset, a start-up, a Mona Lisa painting, an old Ferrari, or real estate. The Swiss Stock Exchange has hired 40 people who are tokenizing all the securities and options traded on SIX. So, the trend has already started, and in the future, there might be millions of tokenized assets. Regarding the Towers Watson report you mentioned, what we like about tokenization is the fragmented ownership and ease of access, as potentially everyone – of course depending on the relevant regulatory regimes – will get access to these tokenized assets.



However, we also believe that people may be too optimistic about tokenization because it doesn't solve the other issue, which is liquidity. Okay, you now own a piece of an asset, but can you transact on it? Will there be market makers for it, or will it be illiquid so that you may not be able to sell it? Along with such questions around the future market structure, we will also face challenges from the regulatory side, because the regulators worry about investor protection and about money laundering. If you start having a lot retail investors investing in very illiquid assets, the regulators may step in. But in general, we see tokenization as a positive and important trend.

Robert Welzel: The digital representation of assets in the future will probably need to be accompanied by amending the regulatory and tax framework in various jurisdictions, too. For example, just a few days ago, Germany presented its blockchain agenda and pretends to be neutral in terms of which technologies should be successful. However, the current legal and tax framework is not neutral towards the employment of specific legal entities such as funds, et cetera.



*To be more specific, **are fund structures actually necessary in the case of blockchain?** Traditional fund tax regimes are reflecting, in essence, the current technical solution set whereby the manager owns all the assets. These concepts may be partially obsolete by blockchain as investors might own in the future all the assets directly and investment management might be only a service. And therefore, so that some of these game-changing technologies can really flourish, we might also need to address some of the tax privileges the traditional fund schemes are granted.*

Lars Kvaalen: Just quickly, going back to Gala's point about the growth of the secondary markets, I completely agree with that, and we are also taking advantage of the opportunities with that. But I also see a new type or risk emerging, let me explain what I mean.

The typical secondaries investors tend to come in with a 100% financial agenda. They want to take advantage of the opportunity to get a discount for an interesting asset and be part of the journey. What you don't get from a secondary markets investor is a lead investor who is helping you further develop the business and steer it in the right direction for all other investors. This in combination with further democratization of investments, e.g. through tokenization, increases this risk.

This effect is what led to the **emergence of activist investors** in public equities over the last decades – publicly listed companies often don't have a strong investor who creates discipline. In the end, dividends are the only real value of holding shares, and someone needs to make sure that a company does so at some point.

Matthias Knab Gala mentioned 71% of the businesses Demium seeded are still around after three years. So it seems your businesses have a higher survival rate than the average startup. What are you doing right, can you share with some your secret sauce?

Dr. Philipp Cottier: Gala, I was actually wondering, three years may be easy to survive, but do you have any insights on 5 years or 10 years? Also, what does survive mean?

Matthias Knab Actually, before we turn to Gala, allow me to share some numbers from 2011, so the data could be a bit outdated but they can still give us an idea.

A study called Startup Genome Report was looking at data from 3200+ high growth technology startups. It was co/authored by researchers from UC Berkeley & Stanford with input from the Sandbox Network and 10 accelerators from around the globe.

Within 3 years, 92% of startups failed. Of those who failed, **74% failed due to premature scaling,** meaning spending money on marketing, hiring, etc., either before you found a working business model (you acquire users for less than the revenue they bring) or, in general, spending too fast while failing to secure further financing. Tech startups tend to have the highest rate of failure among all industries.

But we shouldn't look at averages only as in the US alone the **failure rate varies by state between 90% failure and 75% failure in the first 1 or 2 years.** In Switzerland, the failure rate is much lower more like 60% but the number of people trying is much lower. The failure rate in Vietnam or South Korea is much smaller because the government is pumping money in almost anything with the acronym startup.

Other interesting findings from the report:

1. **Founders that learn are more successful:** Startups that have helpful mentors, track metrics effectively, and learn from startup thought leaders raise 7x more money and have 3.5x better user growth.

2. **Startups that pivot once or twice times raise 2.5x more money,** have 3.6x better user growth, and are 52% less likely to scale prematurely than startups that pivot more than 2 times or not at all.

3. **Many investors invest 2-3x more capital than necessary in startups that haven't reached problem solution fit yet.** They also *over-invest in solo founders and founding teams without technical cofounders despite indicators that show that these teams have a much lower probability of success.*

4. **Investors who provide hands-on help have little or no effect on the company's operational performance.** But the right mentors significantly influence a company's performance and ability to raise money. (However, this does not mean that investors don't have a significant effect on valuations and M&A)

5. **Solo founders take 3.6x longer to reach scale stage** compared to a founding team of 2 and they are 2.3x less likely to pivot.

6. **Business-heavy founding teams are 6.2x more likely to successfully scale with sales-driven startups** than with product-centric startups.

7. **Technical-heavy founding teams are 3.3x more likely to successfully scale with product-centric startups** with no network effects than with product-centric startups that have network effects.

8. **Balanced teams with one technical founder and one business founder raise 30% more money,** have 2.9x more user growth and are 19% less likely to scale prematurely than technical or business-heavy founding teams.

9. **Most successful founders are driven by impact** rather than experience or money.

10. **Founders overestimate the value of IP** before product market fit by 255%.

11. **Startups need 2-3 times longer to validate their market than most founders expect.** This underestimation creates the pressure to scale prematurely.

12. **Startups that haven't raised money over-estimate their market size by 100x** and often misinterpret their market as new.

13. **Premature scaling is the most common reason for startups to perform worse.** They tend to lose the battle early on by getting ahead of themselves.

14. **B2C vs. B2B is not a meaningful segmentation of Internet startups anymore** because the Internet has changed the rules of business. There are four different major groups of startups that all have very different behavior regarding customer acquisition, time, product, market, and team.

Gala Gil Amat: Well, first of all, in our statistic we refer to companies that are still alive and growing.

Rupert Novis: "Alive" companies that are "limping on" should not count, so the growth dynamics are very important to understand for each startup.

Gala Gil Amat: Definitely, I agree, and this is why we went the other way round and examined **why 9 out of 10 startups fail** and analyzed the reasons.

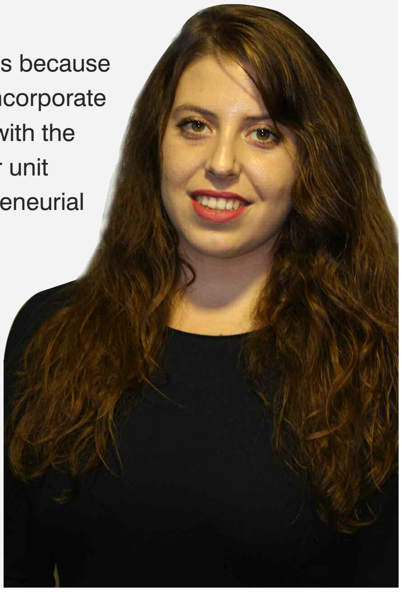
The first one is not having the right team. Second one is not achieving product-market fit, and the third one is lack of funding. So, these are the things we tackle.

We start with the founders, at our events normally 300 people come to us and apply to join Demium. We analyze each profile and from there we narrow them down to 30 which will participate in the AllStartup event and then we only get the best 10 to 15 individuals into the program. Throughout our selection process, these people get to know each other and we understand not them not only as entrepreneurs or their entrepreneurial talent but also personally and psychologically, which is very important.

And also here, just think about how in this venture industry we have done things before. Usually, startups were founded because you went with your friend or your college friend and you used to build a company with a person who often had the same skill sets, same age, everything the same as you. But, from a business perspective, maybe that person was not the best person for you to start a company with. Also, you usually didn't know any psychological dynamics, what are their dreams in life, what do you want to achieve with this.

But we take this step very seriously, so we have three people analyzing each of the profiles. One is the Managing Director of the incubator, who is a former successful entrepreneur, someone who had started one or few startups, sold them and then became an investor. We then have a second person, the Head of Incubation, top manager coming from a successful startup. And then thirdly, a Head of Talent who analyses the profiles from a teambuilding and psychological perspective. When we come to put these 10 to 15 people in teams, we already know things like who they have worked with before, who they can work with now as well as personal information about the candidates, and based on our insights and experience, we are then able to arrange them in dream teams.

Once we have the teams, the second part of the equation is the idea, so here we have a team that analyzes trends in the markets and proposes ideas based on these trends. Then we propose some ideas on a sector aline with the founders' passion and experience. Once that's settled, we take them into our program for 6 months, the team is now in our office space following a development program with different steps and milestones they will have to reach. We have a very stable methodology after 6 years doing this across many sectors.



<u>100% of the companies we have incorporated have raised the first round of investment</u>. This is because first of all at Demium we have our own shareholders, a solid network of investors. When we incorporate a startup, our own shareholders are the first ones who have access to our deal flow, helping with the first round of investment of these companies. Later on, our startups are supported by another unit which we call Portfolio which helps them from there on through the next steps of their entrepreneurial journey.

At that point, the team also moves out of our office space. The portfolio team helps them with hiring and getting new rounds of funding, also we do M&A. In a way, it's like bringing up children, you help them out until they are kind of grown-up and make it on their own but even when grown-up you are still there to help. This is also why we only take minorities' equity stakes in the companies, our aim is to put them in the best position to succeed but letting them have majority ownership of their startup life.

Lars Kvaalen: At Antler, we have a similar survival rate as Demium, though we are a younger firm, so we do not have the same time scale as you have.

I agree that a lot comes down to how you screen. As Gala said, startups fail because it's not the right team, not the right idea – often it's not a scalable idea – or it's a lack of funding.

When we invest we make sure that all these elements are in place; complimentary co-founding team, scalable and validated business idea, and we see that they can quickly build the traction required to raise a good seed-round. If you do all of this right and have access to funding, then the survival rate going for three years and longer should be very high.

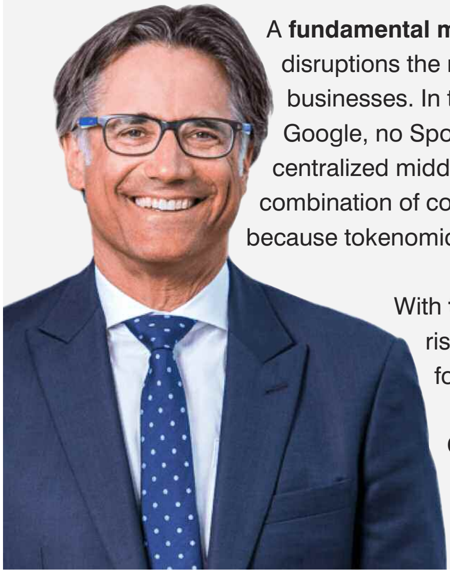
Access to capital is, of course, vital for the survival of a business that wants to scale fast, and this is why we operate in cities/ecosystems where there is sufficient access to venture capital to allow our portfolio companies to quickly find a new lead investor.

Dr. Jim Totty: At Earth Capital, we are looking for a large, unaddressed market opportunity with clear customer pain; we look for product or services solutions to address that market opportunity, and we look for a management team can stitch it all together.

Just using those three filters can reduce deal flow from many hundreds a year down to a few tens a year before we start doing proper dive work into the deals.

Dr. Philipp Cottier: We advise mostly on funds, but also on projects.

There are two types of funds in the crypto and blockchain space – the fundamentally driven funds and the more trading-driven crypto hedge funds.



A **fundamental manager** would typically be based in Silicon Valley, with a very long-term view about the disruptions the new decentralized world will bring to sectors that are still dominated by centralized businesses. In that new paradigm, we don't need banks anymore, no insurance companies, no Google, no Spotify because with decentralized blockchain technology you can take out all the centralized middlemen. With fundamental managers, we are looking for a strong team background, a combination of computer science specialists, mathematicians, cryptographers, also economists – because tokenomics is one of the most complex areas in this field – and VC specialists.

With **trading oriented crypto hedge funds,** we are looking for teams that have trading skills, risk management skills, the right operational set up to do arbitrage, market making, trend-following, long/short trading, et cetera. So, that's on the funds.

On the blockchain projects themselves, there are a lot of deals, but most of them are complete crap, and it, therefore, takes a lot of screening. The good quality projects are quite scarce and not always easy to access. Also, this is a very international industry, so <u>a really good project might be based somewhere in Seoul, in Buenos Aires, or in Berlin, and not in the traditional VC spaces, and so from that perspective sourcing and access can be very challenging</u>.

To tell you a bit more about the actual screening: if it's a base layer protocol project – layer one, or layer two – then it's lot about the technology. Is it a scalable protocol, how does the governance work, or how does it deal with privacy? What are the technology risks, how large is the developer community, and then, of course, we look at tokenomics.

If we are looking at decentralized apps, the **'dApps'** space, the most important question centers around product utility and tokenomics, but of course we also check the team, the project funding, together with the question of user experience and adoption – where will mass adoption come from?

Matthias Knab

Let's look at a number of current events and how they will shape the financial industry going forward – the debacle with the suspension of the GBP 3.7bn Woodford Equity Income Fund which was suspended in June 2019 after it was overwhelmed by customer withdrawals following a series of bad market bets. Over 500,000 investors are now locked in the suspended fund and cannot withdraw their money because Woodford put a surprisingly high amount of assets in unlisted, illiquid stocks. The latest news is that the fund will close closed down and "return cash to investors at the earliest opportunity."

If the Woodford vehicle were a hedge fund, the likely solution would have been to split the fund in two to create what is known as a side pocket. The 40% of the fund that is not liquid and/or hard to price would be put into the **side pocket.** The fund manager would declare that this portion could not be redeemed. The main fund would reopen, at 60% of its former size, and pay out redemptions from the sale of the more liquid assets. The side pocket would only pay out later, when its holdings were sold.

Creating this kind of structure in a retail fund would be highly complex but it would be in the best interests of investors because it would mean all investors would be treated equally.

But obviously, this train has departed for Woodford, and the regulators are already working on tightening the rules for illiquid investments.

The other factor which will change the industry is obviously Brexit. Can you share with us your thoughts on those two challenges?

Dr. Jim Totty: The UK market has been effective particularly in growth capital and late venture capital, and as you said, that is now changing.

The UK will probably lose access to the European Investment Fund (EIF). The EIF had 140 LP positions in the UK, right across the spectrum, everything from life science to the digital sector, and the creative industries.

But some industries are more robust than the sustainability sector. For example, life science will be OK as other life science investors will jump into the gap in the ten million plus range and carry on investing. The life science funding 'food chain' is well-parameterised and very well understood, and there is plentiful institutional money at all stages of development.

In sectors like digital, the impact should also be dampened by the fact that these are less capital intense business models and because the marginal cost of scaling up a business is low in digital markets. However, the sustainability sector does not have a well-parameterized funding 'food chain' and also tends to be more capital intense. It is, therefore, more exposed and we may well see, especially from 2020 onwards, both threats and opportunities here. Our Nobel Sustainability Fund® will capitalise on these opportunities.

Matthias Knab We never know for sure, but there might be changes to where we are in the economic cycle ahead of us.

If things were to cool off, that will also affect corporate venture capital, which lately was also booming. What are your views on the potential repercussions of a slowdown?

Dr. Jim Totty: Well, let me start with a historical perspective.

Those of us who have been through a couple of economic cycles have usually seen that when the belt-tightening comes with corporate balance sheets, the corporate venture capital (CVC) business can be shut down or spun out.

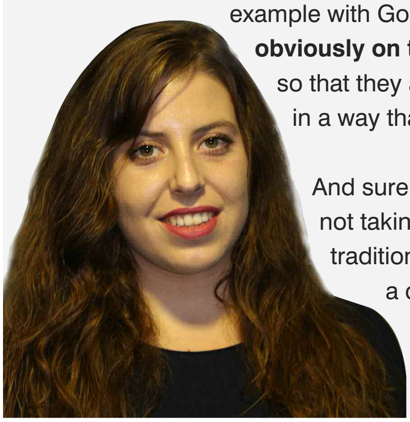
There is also a higher tendency for churn among the individuals within CVC. If you look at the management team of a 10-year VC fund, you can be reasonably confident that the same individuals will be turning up in your board room over a period of a few years, but in the corporate venture capital, you sometimes really have no idea who you are going to see in 18 months' time because these people move on and CVC is often seen as a training ground before people move on elsewhere in the organization.

So, if you believe we are reaching towards the end of a macro cycle, then some retrenchment in corporate venture capital is bound to happen, although some sectors can't really afford to walk away right now. If you are in automobiles right now, walking away from new tech would probably be a risky step to take. So, we'll see, who stays with their CVC activity through periods of downturn.

Lars Kvaalen: I might provoke some people with this view, but corporate ventures closing down in economic downturn may actually suggest CVCs aren't working, right? If it was working, you wouldn't shut it down and stop innovating in a downturn, especially because early-stage investments are typically not correlated to the public markets.

I am not saying that CVCs cannot make their business work, but there have been very few success cases.

Gala Gil Amat: I totally agree with Lars. Many of the large companies have recently gone into corporate VC. Google is a great example with Google Ventures. However, my point here is that I believe **the risk of corporate VC is obviously on the startup side.** I think they have to be very careful when taking money from these players so that they are not putting themselves in a risky position where they get locked down into this corporate in a way that may be putting off other potential investors in the same sector and also future buyers.

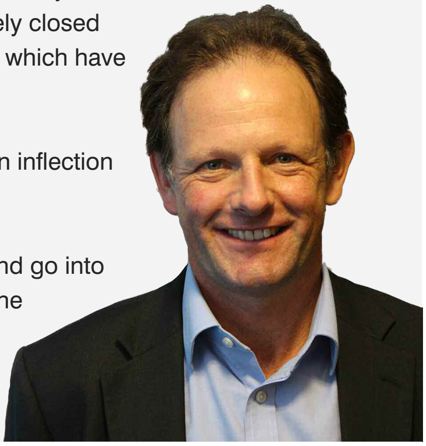


And surely, as Jim pointed out, if there is a downturn many corporate VCs are going to close down or not taking more money out of their balance sheets to invest in new companies. Whereas in traditional VC you usually have a capital flow over 10 or more years, if something goes wrong with a corporate VC, it might just close down and you won't have follow-on investments from their side as well.

Rupert Novis: In the medical sector, a major change happened five to seven years ago. Before that, the big pharma companies used their huge R&D budgets to finance internal teams to explore different areas they were interested in, and of course, the failure rate was very high. These R&D programs have largely closed down, so big pharma companies have now switched to acquiring companies in the market which have proved themselves and reached a successful inflection point.

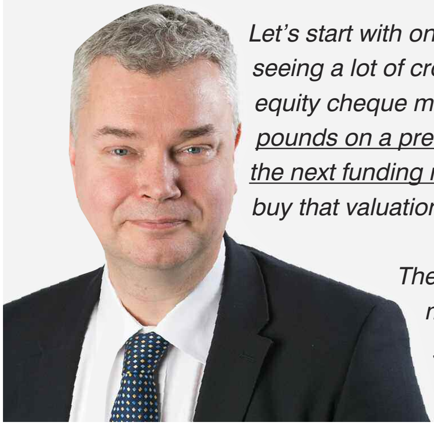
Coming back to the question what we look for… we are interested in companies close to an inflection point. We invest in areas where we know big pharma companies need products.

We don't like to be in a massive race with a hundred or more horses, so we try to identify and go into sectors where there are perhaps only a few horses. We hunt in geographical areas where the rest of the world isn't and avoid the crowds.



Matthias Knab Any observations regarding valuations in VC/PE?

Dr. Jim Totty: It depends where you are in the investment 'food chain'.



Let's start with one million investment ticket sizes. We talked about crowdfunding earlier, and indeed we are seeing a lot of crowdfunding and tax-driven products in the market, which are making that one million equity cheque market very frothy. <u>We are seeing too often that people are raising a few hundred thousand pounds on a pre-money valuation of 10 million, and then, of course, they run into a significant trouble in the next funding round</u>, if you want to do a proper series A round, institutional investors are not going to buy that valuation.

The £10,000,000 equity ticket size, for reasons I was just going through, is currently much more thinly populated and that is putting downward pressure on valuations. Both government capital and private sector fund managers are less active than they used to be *at this stage.*

Moving on to the £100 million ticket size, we are now in the larger private equity buyout markets or potentially even in listed markets. Both private equity and private markets infrastructure funds are well capitalized to invest at this scale. This provides great opportunities for exits and further funding rounds.

So in my view, the seed retail market is too frothy at the moment, and a lot people taking money now will have to swallow a bitter pill 18 months later when they realize that the valuation can't be substantiated.

Gala Gil Amat: I agree that some valuations you can see are overly optimistic. For me, this is one of the positive aspects of our business model at Demium that in the places were are active in incubating such as Belarus, Ukraine, entrepreneurs don't need a lot of capital to actually deploy a minimum viable product (MVP) and show traction. And secondly, the pre-seed and seed rounds that they are raising are lower than in typical VC hotbeds.

We think this is quite an efficient process to first start lean and take not as much money, but then when they actually can show great results and traction and are ready for the next step, they can come to a place like London or other developed markets to raise follow-on investments. Therefore, we see it as part of our mission to demonstrate to investors that there are great talent and opportunities coming from different places as well, and we are seeing great successes.

For example, Grammarly is a unicorn and it was founded in Ukraine. *There are places that are not called Silicon Valley that are creating very attractive ecosystems of talent, very hard working people, but they also understand that their ecosystem or their country is not enough to make a global product and so they also have to think outside of their borders.* We are very excited to open this opportunity for that type of ecosystems.

Demium's mission is to foster entrepreneurship around the world to generate positive economic and social impact. That is part of the purpose our team is truly passionate about, opening up opportunities for talent worldwide by going to places no one is looking at.

Dr. Philipp Cottier: Regarding valuations in the crypto and blockchain space, 2017 was a tremendous hype with ICOs raising tons of money, unjustifiably, sometimes even without real whitepapers and teams. Fortunately, this has all calmed down and corrected. In 2018 and 2019, prices have deflated a lot.

Everyone talks about bitcoin which year-to-date is up over 100%, but the so-called 'altcoins', the smaller coins, have mostly performed negatively year-to-date. This shows that the industry is still self-correcting from the hype, which is very good because fundamentals are becoming more important.

What we see geographically, is that the projects in the US and Asia are a little bit more expensive compared to Europe. In Europe, the main center isn't London but rather Berlin, plus Switzerland which has about 800 crypto startups in its "Cryptovalley", and we also see things happening in Tel Aviv.

A lot of these projects have very skewed return profiles. As I mentioned earlier, most of them are crap and will go to zero – maybe not within the first three years, but certainly after five or ten years. But the few succeeding projects will be worth hundreds of hundreds X because if they are properly set up with scalable protocols and the right user experience, they will capture huge markets and really disrupt existing business models. So it's all about finding these few jewels and sourcing them early on.

What I would also like to add is that cryptos tend to be uncorrelated or even negatively correlated to the financial markets. When you look at bitcoin historically, rolling correlations have on average been close to zero and over the last 12 months even negative -0.4. A lot of people look at bitcoin more as a store-of-value like digital gold or gold 2.0, so the space is quite disconnected from the financial markets, and we think that it will remain so for quite a while.

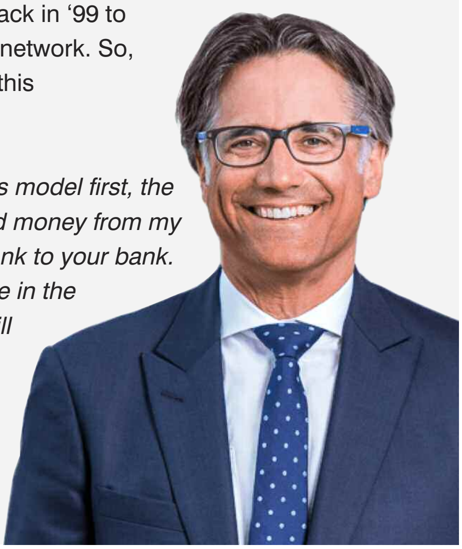
Matthias Knab Looking at it from the outside, our markets, economies and products have become so immensely concentrated over the past ten years with global players such as Facebook, Google, Amazon and others having achieved an absolute dominance, it may be hard to imagine that they will all be blown away by new decentralized players and models.

In the same way, established industries such as insurance that rely on economies of scale may be hard to dissolve or replace.

Dr. Philipp Cottier: Right, this is of course frequently discussed, and I think that humans, in general, overestimate the short-term changes but significantly underestimate the long-term changes.

As I said, it really feels like being back in the 1999-2000 dot com bubble. For those of us who can remember, everyone was very bullish and then everything came crashing down. But as a result of this creative destruction formidable companies like Amazon, Google and TenCent emerged five or ten years later.

A lot of these business models were completely new. I certainly didn't have the vision back in '99 to imagine that you could make money buying and selling data or running a social media network. So, completely new business models emerged, and we think the same will happen here in this decentralized blockchain world.



Let me give you a few examples. Let's start with looking at a typical centralized business model first, the banks. If I want to send you US dollars, we will need 3 to 4 banks in between: I will send money from my bank to my US dollar correspondence bank, then to your US dollar correspondence bank to your bank. This will take 2 days and will cost $30. But, if you think about it, how can this be? We are in the year 2019! This should take a microsecond and cost nothing. So the payment space will be completely disrupted. In the future, there will be lots of different means of payment: banknotes, virtual fiat, new digital central bank currencies, and we will see stable coins and other decentralized payment coins.

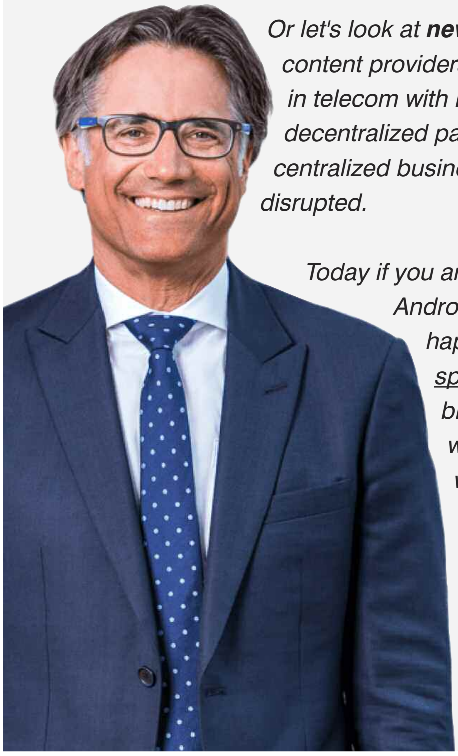
Matthias Knab Philip, I wonder how you actually go about it to participate in this coming disruption. Every week I see or get a pitch of somebody who wants to disrupt this payment space. And, for me and I think for many others, it's completely unclear who will be making it? How do you go about it, how do you make your decisions?

Dr. Philipp Cottier: Well, it's not easy to know who the winners will be, but here are some real examples which we have participated in through our network.

Bitcoin was set up as a payments coin, but it doesn't work or fulfill that purpose because it's too slow – 10 minutes blocktime on average – and only few people use Bitcoin to pay. But you have exciting new projects like **Flexa in the US or Terra in Korea.** Terra has 1 million monthly active users and a growth rate of 30%. Terra coins are used to pay for domestic payments in Korea, so here you have a blockchain project that works.

We will see what happens with Facebook's Libra, but it could potentially have 2 billion users. It's designed to be a stable coin, and although it won't be fully decentralized in the beginning, it will be disruptive.

*But payments represent just one sector, and there are a lot more examples, like the way we consume **music.** Today when you listen to music, you pay Spotify who pays the musician. In the future, you might have decentralized music networks where your wallet, without you getting directly involved, pays the musician directly.*



*Or let's look at **news and media.** Maybe in the future when you read newspapers your wallet will pay the content providers directly for the articles you read. We may see the same in social media with Brave or in telecom with Helium. I could go on with more examples, but, in essence, we are true believers of this decentralized paradigm. It will not be relevant for all applications and sectors simply because centralized business models are, at least for now, more efficient. But some sectors will clearly be disrupted.*

*Today if you are an app developer, you have **platform risk,** meaning that if you are not on Apple, Android and some other platforms, you don't really have much of a business. What we see happening is that a lot of the really good developers are moving to the decentralized app space because there they face less platform risk. They can build apps on different blockchains, and there are inter-operable meta-blockchains like Polkadot and Cosmos, which are integrating dApps with different base layer platforms. So, you can develop without being completely exposed to the big giants and monopolists who today control social media.*

The innovation is very fast, but don't expect the disruption tomorrow, it will take a few more years. In fact, I think within the next three years we will see massive technology advancements and user adoption in this space.

Lars Kvaalen: I think we may also see some sort of **hybrid models** in the future.

You mentioned insurance which as a sector may be disrupted by decentralized models, but that doesn't necessarily mean that there's no platform who handles pricing and builds the product, but the underwriting can easily be decentralized. Even if at some point Spotify won't exist, you would still need some kind of system that connects you with the different nodes of the network. Or, do you see a future where even the platforms are some kind of grey mass?

Dr. Philipp Cottier: In the decentralized world, you have the base layers and then the dApps on top of them. We need to distinguish between the two.

When it comes to the base layer, we think there will be five to ten really giant protocols that will completely dominate the space such as we have it today with TCP/IP in the internet, or SMTP. You cannot invest in TCP/IP, but everyone uses it. In the future, we will have these fast decentralized protocols, each one of which worth hundreds of billions of dollars.

Like bitcoin today – bitcoin is basically a piece of software floating around the internet somewhere, maintained by thousands of node operators. There's no company behind bitcoin, there's no foundation, and there's no IP since it is open source. The big race is to become one of the dominating store-of-value, transaction or smart contract platforms of the future. Corporates will not really be involved in these decentralized base layer platforms, and most users won't even see these protocols because they will happen somewhere in the depth of their wallets or their dApps.

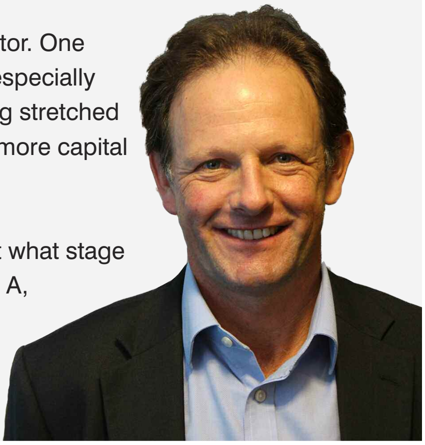
The dApps on the other hand, are generally built by teams that have a new idea, publish a white paper and then raise startup capital from investors in form of a pre-token agreement called "SAFT", **Simple Agreement for Future Tokens.** The team will then develop that blockchain, beta test it, and go live after 18 months on average. The tokens will be listed on some exchange and start trading.

The reason why you need the tokens to start trading so early is that without tokens, the decentralized blockchain project wont work. You need node operators and validators who validate the different blockchain transactions. And in order to give them an incentive to do so, they receive tokens through mechanisms like mining, staking, baking, burning. But for that you need the tokens to be liquid, have utility and value, and this is also why the tokenomics I have mentioned a few times are very relevant.

So you are right in your description of hybrid models that may emerge, with decentralized base layers and dApps, and corporates providing services around or on top of the dApps. Some applications will have corporates involved, while others will be completely decentralized. We are still very early in the innovation cycle.

Matthias Knab Do you have any other observation, remark or question?

Rupert Novis: We talked a bit about the macro changes going on in the private capital sector. One change is that the length of time investments are held tends to be longer now. Previously, especially **time frames in VC,** we were looking at a five to seven-year investment, these are now being stretched to eight to ten years on average. This can result in additional investment rounds, requiring more capital over greater length of time – not ideal.



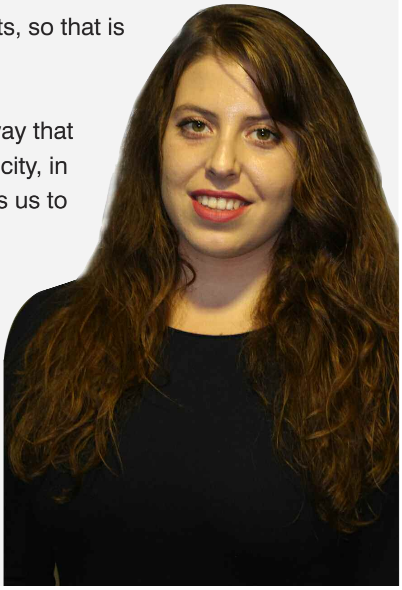
Therefore, as an investor, you have to be very careful about the projects you take on and at what stage they are at, and make very clear decisions about whether you are coming in a seed, Series A, growth, or even beyond knowing that an extended "hold" time period that has become the new norm.

Matthias Knab Co-investment is also a term that is often discussed, what would be some comments, observations or recommendations on co-investments?

Lars Kvaalen: The meaning and importance of co-investment depend on the context, but in our case, co-investment isn't the ideal model.

We have lots of interest for making co-investments, but as the pre-seed investor who does all the heavy lifting, we prefer to invest alone, allow our portfolio companies to build some traction and then raise a new round at a higher valuation. The high interest is of course very encouraging.

Gala Gil Amat: Co-investments are important, and I already mentioned the growth of the secondary market where we also have been able to cash out on some of our startups.



The industry also looks at exits, and while we haven't done an IPO yet, we have had three exits, so that is also very exciting. In one case, we sold the company in five months.

For us, what is very important is each one of the local teams in the incubators, because the way that we do it is that we share the equity that we take in each company with the local team in each city, in the form of a carry, so they are motivated to make the startup a success. Moreover, this allows us to create a scalable model that we can replicate all over the world rapidly.

We aim to cover places where there's less capital available but great talent and help give them more visibility in order to generate a positive economic impact in these developing markets. We are already seeing new capital deployed, for example, by institutions like the European Union in certain European countries like Poland or Hungary. Demium is contributing to this change happening where startups in these regions will be better funded through venture capitalists in and from their own countries. Still, we are then in a good position to help them grow to the size that markets like London require.

Dr. Philipp Cottier: I have a question. When you seed a new company, how much money do you typically put aside for later rounds if it's successful?

Lars Kvaalen: We have a quite free mandate, but in general I would say that we have around 20% to 25% of the capital in mind to deploy in the following rounds.

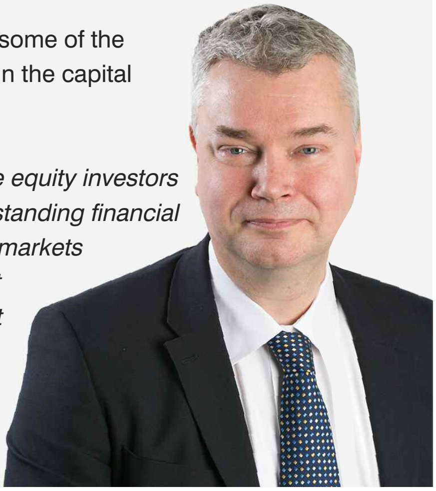
We are also setting up an opportunity fund on top to do follow on investments across our European portfolio. The mandates of the two types of funds will be quite different, so there won't be value leakage between the funds, but it gives the possibility to extract more value from the best companies.

Matthias Knab Jim, before we close, let's look at the sustainable PE/VC and impact space again. In your space, how do you go about co-investments and do you have any final comments?

Dr. Jim Totty: Firstly, co-investment happens a lot. At Earth Capital we often co-invest in equity syndicates, maybe three investors on average but probably not more than four as it may become too complicated then.

*Clearly, you have to think about **alignment of investment interest.** We talked about corporate venture capital, family offices, institutional funds, and retail money – these capital sources are all fantastic for co-investing if everyone got the same exit horizon and same structural preferences. But when you are working with four different types of investors, the chances for alignment are starting to decrease, and also you have to ask a lot of questions about who is going to be back on the next round. So, people need to keep this in mind.*

And just to wrap up, the exciting thing in what I am doing is **taking new business models through the entire capital markets food chain.** If it's capital-intensive infrastructure, taking them from their first pilot plants into full construction and through to mainstream infrastructure markets, and, ultimately, maybe even to the listed capital markets. If it's a service or operating business going through the gears in private equity and going to buyout and then potentially into the public markets via IPO or going to a strategic acquirer.



The thing about sustainability impact investing, because you got this capital intensity that some of the other sectors lack, is that you need to be very mindful of the entire investment food chain in the capital markets.

There is often a lot of talk and sometimes questions around what 'value add' we as private equity investors are bringing to a company. One very, very clear value add in private equity is really understanding financial markets and being able to help management teams walk that journey through the capital markets ecosystem, knowing what the investment risk-return appetites are at each point along that food chain, who the investors are, what they are looking for at each point, their investment styles, and what the ultimate exit is.

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