Linear Capital - 2022Q1 Newsletter

April 30, 2022

Dear Friends,

Hope all is going well with you and your families!

Thank you for being supportive along the way. As you may know, we successfully raised our Fund V by the end of year 2021. This is a $500m fund consisting of a main fund focusing on early-stage tech investment in China, plus an annex fund focusing on later stage of our existing portfolio companies who stand out. We spent just 1.5 months reaching oversubscription by ~30%.

It's a pity that we don't have you in this latest fund, but we still want to share with you our development, observation, and insights into the market from time to time. In this new year starting full of uncertainties, we are very glad to present the first quarterly newsletter (Q1) in 2022 to you. We will also keep you posted about this quarterly update going forward.

Out of question, we look forward to hearing from you too. We'd love to catch up whenever you think it a proper time. Do keep in touch and hope our path will cross someday in the future.

Enjoy!

--- Observation and Insights ---

Investment

The grand market in China in Q1 of 2022 was turbulent although the tech sector was relatively stable and continued to grow as expected.

It was turbulent in mainly two ways -

- Externally, **the geo-political challenges** with big events like US Federal interest rate hike and Russia-Ukraine war that brought in concerns regarding the China's external facing part of the economy.
- Internally, **the Covid outbreaks in Shanghai, the largest financial center and one of the largest manufacturing and logistical hubs in China,** brought an abrupt attack to production and supply chain stability, which further dampens confidence in the economic recovery.

Yes, our Shanghai team (17 out of 20, including myself) has been locked down to work from home for more than 4 weeks so far and we think it will require another 1-2 weeks before we can be allowed roaming on the streets.

In such a period, whining and pessimism become an easy way to defer to and we get easily lost in the noises. So, let's do a more comprehensive review before making the right judgement.

Let's talk about the major risk factors first:

1. Given the bad performance of the economy in the last Q4, we expect offsetting policies should come out to help the economy recover this year.
2. Covid-controls: Shanghai did a really poor job in battling Covid this time. The city hesitated at the beginning, trying to contain the Omicron while not disturbing everyday life. It was great intention until it failed. And it got the worst result - we had to be put in a very severe lock-down while the virus continued to go viral. Shanghai represents less than 2% of the population although its impact on China economy is much bigger than that. In order to understand China's way of dealing things, you have to always think in a bigger picture. Quarantining 2% people to save the remaining 98% is worth-trying strategy until data really proves the virus is not containable or it's not really worthy to contain the virus (it has to be based on case fatality rate and medical facility preparation). When most Chinese are enjoying a normal and free life, I bet the dynamic zero-COVID policy will continue for some more time. I am not arguing which strategy is right or wrong, but simply putting out the analysis predicting how China will deal with such challenges. So prepare to see the ups and downs of dynamic impacts due to covid lockdowns here and there, now and then. It will be common this year. Given Shanghai's bad record, I think the response to any new cases in any other city will be very prompt and harsh - you may see quick quarantines of large areas based on only a very small number of identified cases. The idea is a few days' lockdown (even it might be over-reaction) to trade off for longer term stability of work and life.
3. Geo-political pressure. The sudden outbreak of Russia-Ukraine war and other issues have brought in bigger pressure on China's relationship with the US (already not good) and Europe (becoming subtle). Given the sensitivity of this topic, I won't be able to elaborate in this letter, but let's hope the war could end soon and the impact on everyone (especially the Ukraine people) could lessen soon. Forgive me if I dare to only say one thing about the US policy - US might want to refrain from their sanction-holic way towards China, instead US could demand more reciprocal treatment of development/investment/business/financial opportunities in China. It's a more sustainable and reasonable way to drive China to be more open and more aligned with the US interests and values, in which there are definitely gems. I might be naive here, I sincerely believe that US and China, two of the greatest countries on earth, should and could work out a way towards shared prosperity.
4. Capital market decoupling (delisting from US and relisting in Hong Kong or STAR boards). We are not sure delisting will actually happen or not, but let's be prepared for that. Hong Kong stock market will surely rise, but it may take a few years to mature. The

Shanghai STAR board may let more VIE deals to try out.

There may be more things to complain about investing in China now but the above four are the most challenging risks we think that are worth emphasizing. **All these factors shall play out with more visibility in the next 6-9 months.**

Let's switch topics and talk about opportunity factors. You have heard about many arguments about China's competitive edges, but I just want to point out a few things from "early-stage" "tech" investor's point of view -

1. China is the largest place that can massively apply new technologies like big data/AI/Robotics/New Materials for large scale industrial/business upgrading. US may be (way) more advanced on a lot of fundamental research and scientific breakthroughs, however large scale applications of new technology are much less likely to take place in US nowadays than in China. If premium returns can be generated from such combination of frontier tech & large industrial base, China cannot be ignored.
2. China has the largest number of hard-working and well-educated engineers/scientists that are best suited for engineering and scientific experiments that would make the forementioned applications possible. These applications usually require a large number of R&D personnel to collaborate and iterate. China can do so at a much lower cost.
3. The Chinese government now views technology as a succeed-or-die sector for the nation and pouring many resources in R&D and help technology companies succeed. The golden time for technology business is coming. The road is muddy, but the march has begun. **This is a tectonic shift in opportunity set in China.** If we cannot realize this, we will fail miserably.
4. Early-stage investments, by definition, are more resilient to cyclic challenges than late stage or public market investments. If we hold a longer-term view and believe China will survive and thrive during the world order restructuring, "early-stage tech" investments shall prevail.

Nonetheless, our Q1 was fine but we are taking very pragmatic measures to prepare the next few quarters, likely to be filled with more unexpected challenges.

Summary of some Trends and Observation

- Grand Weather is deteriorating - the short term (at least the next 6 months) will get worse
- USD Funds in China will be reshuffled. Many funds may not survive through the tectonic shift of the competition landscape.
- Due to covid lockdown, US LPs are losing granularity about what's going on in China.

This is a visibility risk. From our reading in the front line, the technology founders are making very strong progress in many application areas to use technology for significant productivity lift. When travelling is allowed, we would happily welcome you and help organize visits to the most inspiring technology start-ups here. They gave us the confidence in the future of China's technology business.

- "Capital unfriendly" policies may have run out - hope to see more growth-friendly policies to come out.
- However, expecting more uncertainties is the only certainty in 2022.

Health check of Linear Portfolio Companies

Like what we did in 2020, we went through our portfolio companies (mainly on all USD/RMB Fund 3 & Fund 4)

- Fund 1 and fund 2 are fairly mature and won't be much impacted by the economy. The best companies are all very well-funded and their cash flow stays strong so far.
- Health check for Fund 3-4 (~60 companies)
    - More than 80% are healthy on runway - 12 months and above
    - 10% are within 6-12 months and they are raising capital actively.
    - We will put some extra care for the troubled 5-6 companies with less than 6 months of runway, to help their equity/debt financing.

Overall, we are not worried about the overall performance of our companies. After all, technology sector has been blessed by the government policies and favored by the capital market so far.

Advice to Portfolio Founders

- Founders must keep morale high and stay strong. Grit is required to sail through the upcoming storms, which are coming whether you like them or not.
- Take pro-active precautions, save resources, act prudently and over-communicate to make sure the teams are aligned on the same page. Also use this opportunity to make big changes to optimize strategy, culture, and team structures, etc. Such changes could have been very controversial and challenging previously. Now is the time.
- Should pay immediate attention to cash flow and runway (inflow - outflow -> runway)
- Outflow: more rigid budget - spend wisely and strategically. Do ROI analysis and ask more questions before expenditure approval.
- Inflow: more attention on revenue, especially on payment settlement. Revenue reflected on bank balance is way more valuable than book numbers on contracts.
    - Fund raising strategy - focus on speed, not on valuation; as price will probably get worse in the next 6 months
    - Runway < 6 months, already too late; but better late than sorry, go out now
    - Runway 6-12 months, plan ahead and go out now, get the fund-raise done with 3-6 months
    - Runway 12-18 months, safe, but don't hesitate to interact with pursued investors
    - 18 months or above, ok not to raise now.

Our own strategy

- We will slow down a bit on our capital out-flow, preparing to prolong the investment period from 2-2.5 years to 2.5-3 years (20% slower than initially planned). As a result, we budget $60-70m for new investments this year on 12-15 deals + follow-on + cross-fund. We will adjust accordingly as the situation changes.
- We will continue the **gaze-to-attack strategy** as we laid in our last management letter and **cherry-pick with absolute high bars at deeply discounted prices.** I have marked a few sentences with comments from the last letter to re-iterate our view. The good thing is that we have abundant dry powder as luckily, we had a very successful fund raising last year. **We just need to use the capital well and wisely.**

Wait-to-attack strategy in Q1 2022

In terms of investments, we continued to stay steadily active in Q4 2021 and have been preparing deals for our fund 5. We didn't take an aggressive approach even though we had plenty of fresh powder but will wait and see the market downwards adjustment stablizes. **However, whenever we see a great team applying great technology for a great problem at a great price, we will mobilize for an investment.** We will continue this "wait to attack" strategy in Q1 2022. This period resembles what we experienced in early 2020 though context is very different. The grand economic pressure, geo-political tensions, etc are quite different. **However, the forward pushing on frontier/hard technology developments and the corresponding digitization of many business and industrial sectors continues to reinforce.** We continue to believe in the fundamental trends under all the turbulence on the surface.

We also aniticipate China will take strong steps, such as easing more currency, loosening certain controls for selected business sectors to boost the economy. We just don't know the pace and intensity of these measures, yet. Given that the political-economical weather is out of our control, we take a conversative optimism stance on the possibility.

We just don't want to judge too fast - too many uncerstainties are in play, and act too hastily - overreaction often backfires.

easing more currency
Harry 1 minute ago
Already took place.

loosening certain controls for selected...
Harry 1 minute ago
I hope it will happen soon.

- We will plan more effort on generating DPI this year. Although the public capital market has changed significantly in the last 6 months, we still plan to make the DPI of Fund 1 greater than 100% by EOY, through reasonable exit approaches.
- Sharpening internal saw - use this period for more research seminars, team training, internal reflection and cultural consolidation. We are refining our book of principles based on our past practices and reflections.
- Regarding future valuation - capital dry-up will further pass to early stages. Price shall continue to decline. Although technology is less impacted, in the grand weather change, everyone has been impacted. Our view shared in the last letter largely stays with minor comments based on reality checks in the past 3 months.

- Valuations adjustment

We expect the valuations will adjust. Expect less early companies to be able to raise their early rounds as easily as in early 2021. The overall difficulty levels for fund-raising have been rising in the past few months. The public market will continue to see black swans here and there and the negativity is passing to venture. **Our gut-feeling is that the general pricing level of early stage companies should go down 30%-ish if not more compared to Q1/Q2 last year. From the other side of view, it also means that we can buy a good asset that cost us $1M last year at $700k in Q1/Q2 this year.**

For existing portfolio companies, they performed fairly well in the downwards pressure in Q4 2021 as quite a few (16 portfolio companies) announced their closing of new rounds. **For those who plan to raise fresh, we would ask them either to raise fast to focus on speed not price so they can have runway for more than 12-18 months; or don't raise until Q3-ish, which we expect situations to improve.**

However, sector leaders will be able to receive more funding as investors see these sector leaders with less risks of pulling triggers. Funds still have pressure to invest but they will invest in sector leaders that are more likely to raise enough funds to go through difficult times. **We will put more energy to help the fund-raising of existing portfolios as we believe many are the best players in their domains.** If we are successful on this strategy, this down-turn should help weed out some competitors that are less capable of fund-raising. We don't expect Linear portfolio to have much trouble in the following quarters to come. On the contrary, we expect the leading ones to keep getting bigger and our portfolio to run stronger in 2022.

Our gut-feeling is that the general prici...
Harry 6 minutes ago
In 2 cases we made an offer, we were able to get 30-40% off their asking price.

For those who plan to raise fresh, we ...
Harry 5 minutes ago
Still the advice. But Q3 may seem a bit too optismic now. Maybe Q4 or next Q1.

sector leaders will be able to receive m...
Harry 4 minutes ago
Yes, we still very much think so!

- Hiring

We have made 2 new hires in our investment team, and 1 new hire in our operational team in Q1. We continue to hire actively, though with more caution and higher bars. Please don't hesitate to recommend talents who are passionate and good at tech investment to us!

--- Investments ---

- In a nutshell, by the end of Q1 2022, Main Fund V has offered 9 Term Sheets to target companies. Just to clarify, 5 of the 9 term sheets were actually issued in Q4 of 2021 as pipeline deals for Main Fund V. So, if we split it into two quarters:
    - 2021 Q4 - 5 terms sheets offered; and
    - 2022 Q1 - 4 terms sheets offered.
- As for Annex Fund II, we haven't locked any potential investment target yet. We keep gazing and selective about the targets. Hopefully, we may trigger the pull in the next two quarters.

We closed the following new deals in Q1 2022

- **Company J**
    - Company J is a startup developing AMR (autonomous mobile robot) solutions applied in pharmaceutical and FMCG industries. The key product of Company J's AMR solution is a series of autonomous forklift trucks, which can well meet the specific health and safety requirements of the above two industries. The founder is extremely enthusiastic about robot technology and applications. We believe Company J team is perfectly suitable for combination of robotic tech and specific

industries like pharma and FMCG.

- ## Company M
    - In our definition, Company M is a frontier-frontier technology company. It is devoted to becoming a general artificial intelligence company that can provide infrastructure OS for the age of machine consciousness. Company M aims to provide full-true human-like service to futuristic scenes, like AR/XR, metaverse, anthropocentric robots etc., by way of a general AI framework.

- ## Company W
    - Company W is an eVTOL (Electric Vertical Take-off and Landing Vehicle) OEM and operator. We believe eVTOL is a viable way to solve intercity commuter traffic (less than 300km) pain points like traffic jams and time consuming. This is a futuristic lifestyle we are convicted of. The founding team is also a team we believe can leverage the power of aviation and electrification to revolutionize the way people live their lives.

- ## Company JING
    - Company JING is a SaaS service platform that uses marketing automation technology to automate and optimize enterprise marketing efforts. The company started focusing on marketing tech in 2016, building products to help clients track data, analyze data, generate personas and evaluate potential clients automatically to increase users' conversion rate. Typical clients include B2B companies like Agilent, MSD and FESCO.

- ## Company MDB
    - Company MDB is a new generation of database (Pluggable database). It can break the boundary of conventional taxonomy of database systems (OLTP, OLAP, graph, document, time series, etc.) and support an application's all data model/format needs efficiently and consistently. While the vision looks similar to multi-model databases, a trend that supports multiple data models in one database using a single, integrated backend, a distinguishing difference is to physically represent the same piece of data in different models/formats so as to guarantee high performance of all access patterns. From a user's perspective, the database provides APIs and query languages for different data models and can efficiently process queries of individual data models. More importantly, it frees the user from complex system details and provides transparent data transformations that are high-performing, fault tolerant and (strongly or eventually) consistent. Well, we believe Company MDB provides a promising solution which could be much better than those of other big-name domestic database startups in Chinese market.

- ## Company CS
    - Company CS is focused on the vertical application and ecological construction of NFTs and Metaverse. The application (named as Company CS) is the first NFT SaaS system in China, with complete functions of NFTs creating / programming / displaying / transferring. The fully closed-loop process provides a full range of NFTs application scenarios and business APIs, to help creator and enterprise can quickly have their storefronts of NFTs and Metaverse display space. By serving various businesses and individuals migrating to Metaverse, Company CS is devoted to making everyone and businesses have their digital goods (NFTs) and Metaverse.

- ## Company BR
    - Company BR provides RT3D (RealTime 3D) experience for virtual scenes. Currently,

Company BR takes the music concert scene as the entry point, and provides a complete set of full-true internet experience collaboration platforms for the brand side, connecting various professional producers (lighting engineer, sound engineer, scene designer, etc.) to efficiently produce virtual concerts.

--- Other things you may be interested in ---

We kept telling our stories to quality media outlets.

- Our Managing Director Can Zheng was interviewed by National Business Daily, a national wide business media. Can Zheng shared why we believe in investing in original technology.
- Our Managing Director Songyan Huang was interviewed by CYZone, the influential entrepreneurs' community. Songyan shared stories about how we invested in iBuilding, Aikenong and Agile Robotics, which reflect the philosophy of Linear's investing in frontier technology to empower industry upgrade. Songyan also spoke at a live stream hosted by China Business about his opinions towards innovation in car's supply chain.
- Linear earned *Top 30 Best Early Stage Investing Funds* from First Voicer.

Linear hosted many events to keep in touch with our portfolio companies as well as reach out to audiences like students, entrepreneurs, and talents in tech companies.

- We hosted an open house event (video included). Some of our portfolios visited our office and shared their take on startups/industries with each other.
- Linear organized online events in collaboration with University of Pennsylvania Startup Club. On the other hand, we also have casual events to keep in touch with entrepreneurs and talents.
- Linear Academy, our branding entrepreneurs community launched many great courses, such as 《What I learned from being a manager at a fast growing B2B startup》, 《How to use OKR》, 《How to allocate your options》 and 《How to face the capital market in the uncertain time》.

Also, we'd like to share with you some updates about Linear portfolio companies in prior funds.

In the first quarter of 2022, some of our portfolio companies that we invested in very early stages raised new rounds. Linear participated in those new rounds and kept assisting them to get public exposure. We listed some media reports below.

- GuanData raised 280 million RMB in Series C led by Tiger Global.
- ACXEL raised Pre-A+ round with around 10 million RMB led by Qiming VC.
- Boolv raised two rounds in three months.
- Habinger announced that they finished Pre-A round led by Sequoia China Seed Fund.
- Uniner Technology raised two rounds in six months.

- EYIMU was reported by BRTV Fortune Channel, telling their stories about how they leverage technology to increase management efficiency in farming.
- The founder and CEO of Lead Digital was interviewed by China Business Network, sharing his thoughts on the critical issues in high-end manufacturing.
- Tezign was awarded as "National Industrial Design Center" by the Ministry Industry Information Technology of China.

Best regards,

Linear Team