

Linear Capital 2024Q3 Newsletter



Oct 20, 2024

Dear Friends & Partners,

Thank you for being supportive along the way. We are very glad to present this letter to summarize our thoughts and recent activities.

--- Observation and Insights ---

Real Estate Market

The real estate market is intricately linked to the national economy and people's livelihoods, significantly influencing people's willingness to consume. It represents a massive wealth effect, as many people's assets are tied to real estate. If there's a widespread expectation of falling housing prices, individuals' perceptions of their own wealth decrease. This pessimistic outlook can stifle consumer spending. Therefore, it's crucial to shift this collective mindset.

Stock Market

The stock market directly impacts a company's financial support and its appeal to foreign investors. It serves as the ultimate reflection of corporate economic activities in the financial market. When the stock market is sluggish, it directly affects listed companies, which in turn dampens enthusiasm in the private capital market and consequently influences the financing activities of all companies. Without sufficient financing, many companies, particularly tech firms, cannot develop rapidly.

Foreign Exchange Market

The foreign exchange market is directly linked to China's global trade and financial interactions. As a major exporting nation, significant issues in the forex market are unacceptable. Therefore, the goal of the policy is to halt declines and reverse the consensus of falling confidence. Previously, there was a shared belief that China might enter a 'lost decade' similar to Japan's 'lost 30 years.' Whether it's 30 years, 20, or 10, any duration would be too long. Once this sentiment becomes a consensus, it transforms into a 'self-fulfilling prophecy. Thus, the implementation of these policies aims to break this consensus of sentiment.

These significant policies are evident in the news. Our perspective is as follows:

First, this is the right direction. We previously described the situation as "darkness before dawn" - particularly dark. Now, we're seeing the first light of dawn. While not yet too bright, it's especially encouraging.

Second, we must remain calm, avoid getting carried away, and continue to monitor. We're focusing on key aspects:

Continuous policies and follow-up actions: While we don't expect the stock and real estate markets to rise continuously, it's possible to halt the decline. Key questions include: will bank funds enter the stock market in a reasonable, feasible, and efficient manner? Will there be hesitations or restrictions leading to incomplete execution? While theoretically possible, we shouldn't underestimate the government's execution ability.

Thus, the crux lies in sustained policies and robust follow-up actions.

Overall Outlook

Overall, I believe we're heading in a positive direction. The public market changes are encouraging, though this doesn't necessarily mean stock prices will continue to rise. In the near term, especially around the U.S. election, I anticipate significant volatility in both China's and U.S. stock markets. However, I'm optimistic about China's long-term economic improvement, so we'll continue to monitor the situation.

The shift in perception typically takes 6 to 12 months to transmit from the public market to the private capital market. We expect to see gradual changes, but we'll remain prudent throughout this process. We have always firmly believed that frontier tech is the best way to enhance productivity, as history has repeatedly proven. However, in our specific investment choices, we will continue to cautiously bet on the most outstanding early-stage entrepreneurial teams with reasonable valuations. This is a strategy we have consistently adhered to. The only difference is that now we are perhaps a little more optimistic about both the short term and the long term than before.

Views on this Market Rescue

1. **Monetary policy:** Announced first at the end of September. The main content is to inject more capital into the market and allow different capital instruments to enter the market. At the same time, measures such as reducing reserve ratio requirements (RRR) and lowering interest rates will encourage more capital to flow into the stock market and the real estate market, thereby reducing the real estate mortgage burden on the public. I believe there is still significant room for maneuver in this area in the future, as the central government's debt ratio is not high, leaving ample space for policy implementation.

2. **Fiscal policy:** This relates to how funds are spent. The most significant challenge currently is the issue of local debt, while the central government's debt burden is very small and has always been relatively restrained and conservative. So, how to leverage the central government's low debt to address the high debt of local governments, thereby providing more room for them to repay debts owed to enterprises? At the same time, more funds can be directed towards improving public welfare. It is essential to avoid unreasonable enforcement practices, particularly blanket cross-regional fines, seizures, or arrests., which have significantly impacted local businesses over the past year. I am confident that this situation will improve in the future. The government's approach this time is to establish market expectations through public meetings by the Ministry of Finance, reassuring everyone that the central government will adopt a very proactive fiscal policy, in conjunction with existing monetary policies, to invigorate China's economy in both 'allocating funds' and 'spending funds'.

3. **Industrial policy:** China's industrial policy has always been very proactive, but further balance is needed in handling the issues between the private and state-owned economies. The state-owned economy is stable and reliable, but under the current environment, merely relying on conservative and steady approaches cannot drive economic growth and may lead to stagnation in the long term. The private economy, on the other hand, is very dynamic and innovative, but it currently faces pressures from both revenue and expenditures. Additionally, various issues with private capital regarding investment and exit have resulted in imbalances and unhealthy conditions in industrial development.

The dual effects of the aforementioned monetary policy and fiscal policy can secure the two cash flows for enterprises: on one hand, capital investment needs the support of monetary policy, as it can foster a thriving public market that encourages active capital in the private market. On the other hand, fiscal policy will ultimately impact corporate revenue. This directly affects businesses that have the government and state-owned enterprises as clients, and given the significant influence of overall fiscal spending on the economy, it will also indirectly affect the revenue of all businesses. This will provide more opportunities for companies that have primarily relied on overseas markets for survival in recent years to generate more domestic revenue, which we look forward to. The two aspects related to enterprise cash flow - capital income and operational income - are both directly and indirectly influenced by monetary and fiscal policies.

A favorable business environment requires genuine commitment to industrial policy, which involves upholding laws and maintaining the market order. Therefore, these three key policies are the focal points of this reform and are highly anticipated.

Redefined Globalization 2.0

Recently, I visited Europe in July and passed by Southeast Asia on my way back. In August, I spent a week in the U.S., and in September, I met many LPs and potential LPs during SuperReturn in Singapore. Then, in mid-October, I took portfolio companies to Japan to explore the region. My overall impression is that many places are facing significant economic pressures, while efficient innovation is very scarce. The world is undergoing tremendous changes, which may bring new structural opportunities. China is one of the few countries that values, encourages, and invests heavily in technological innovation, which could represent a significant opportunity for the new generation of entrepreneurs. We shouldn't just compete within China but should leverage China's strengths to compete globally.

Challenges and Opportunities

However, these kinds of challenges are not easy.

Firstly, China has many excellent technological innovators, but these innovators do not necessarily make great tech entrepreneurs. The biggest difference between an innovator and an entrepreneur is whether you are refining a technology or building a business. The process of transforming technology into a product, turning that product into a commodity, and scaling up that commodity requires using technology as the core, with products as the facade, forming a competitive edge through a product matrix. This involves establishing effective channels, serving customers, building customer loyalty, continually enhancing their trust in you, and then expanding that trust - eventually forming a brand.

In this process, you need to collaborate with many stakeholders and allocate benefits. The internal team must also grow; the team needs to continually optimize and upgrade, following a survival-of-the-fittest approach to form an efficient organization. It's important to nurture relationships but also to focus on results. This path of entrepreneurial growth is what we have observed over the past decade, highlighting the significant difference between being a good technological innovator and ultimately becoming a successful technology entrepreneur.

New Requirements for Globalization - now 2.0

This difference will pose new demands in international business cooperation and market expansion over the next decade. Beyond what has been mentioned, it also includes whether you are willing to go global, whether you can actually do so, and how quickly you can adapt to local markets and find suitable partners once you're there. Advancing business in the right and suitable way doesn't have an absolute right or wrong; it's about what fits and what doesn't. This is what we believe to be business Darwinism.

How can you ensure that language skills are up to par? Is communication ability sufficient? Can interests be reasonably distributed? When significant issues arise, is there a key person who can immediately go there to collaboratively solve problems with local partners? When should you establish your own office locally? These are all highly challenging questions without standard answers. The solutions to each of these problems depend on your type of business, its innovativeness, uniqueness, and bargaining power, and can only be truly effective in the context of that particular time.

Talents and Advantages

Can you make the "right" decisions? Can you ensure that the right talents execute those decisions effectively? I believe the demand for this ability will be very high in the future. However, we have outstanding talents who not only possess unique technology and can create excellent products but also have strengths when compared to people from other places.

Chinese entrepreneurs have an advantage known as the 'grind,' which many people in other countries recognize but may struggle to emulate, often dismissing it as a lack of enjoyment of life among Chinese people. This 'grind' manifests not only in the ability to endure hardship but also in a dedication to innovation. This innovation is not limited to technology but also includes product innovation, both of which are crucial. The attention to detail that Chinese entrepreneurs have when creating products far exceeds my expectations, especially in terms of products that combine hardware and software. Whether it's smartphones, electric vehicles, or smart hardware like DJI or Insta360, or companies we've invested in like Rokid, the product experience and cost advantages far surpass their foreign counterparts.

At the same time, Chinese entrepreneurs are very 'driven' when it comes to handling relationships, solving complex problems, and facing challenges, demonstrating strong abilities. In some of the most challenging and even dangerous places in the world, we can see many Chinese businessmen promoting products in both expected and unexpected ways. I have met locals from Africa, South America, and Southeast Asia who have shared with me their love-fear perspective regarding the capabilities of Chinese entrepreneurs. While 'fear'

might be an exaggeration, they do acknowledge the competency and dedication of Chinese individuals but are also concerned that the competitiveness of Chinese teams could threaten their interests. Therefore, achieving shared benefits with the local ecosystem—not just direct partners—and aligning interests is the new challenge in the era of globalization 2.0.

Our Strategies

As an early-stage fund focused on cutting-edge technological innovation, we aim to find those 'grind-er' individuals who have advantages in technology and products, as well as strong will and learning capacity. We strive to help them solve complex and challenging problems, support their growth, and assist them in expanding their global business in the new era by finding more local partners. This approach will enable them to succeed on a global scale while growing bigger and stronger.

Regardless of whether new economic stimulus policies can effectively drive a rebound, we need to make sound investments. However, if China's economy remains sluggish, the tech companies we support may need to rely more on globalization 2.0 to grow. I believe that China's strengths in talent, certain tech sectors, and supply chain will allow this globalization to still create value and ultimately achieve capital returns. If China's economy and market can effectively rebound, we will gain additional benefits. Therefore, our investment strategy should not depend on China's economic stimulus policies, but rather leverage their impact for an amplifying effect. This is our core mindset."

Like our business visit to Japan in October, which marked our first-ever business trip there and brought us many insights. The goal was to collaborate with key players in the Japanese market and help our portfolio companies establish a foothold in Japan. By doing so, when our companies expand into Japan, they will have the right partners to engage with, allowing them to gradually enter the relevant circles.

This is our current strategy for helping portfolio companies expand internationally. Some companies can even establish local roots right from their inception. As long as there is a "China Premium", we can not only understand their advantages, products, and markets but also provide real help.

Best regards,

Harry

--- Investments ---

We closed 4 new deals in Q3 2024. Please see below for details.

- **Company BB**

- Biotechnology represents a pivotal shift towards sustainable and efficient manufacturing in the food and chemical sectors. Despite advancements in synthetic biology, transitioning from lab to commercial-scale production remains a significant challenge, often hindering companies due to the complexities of scaling processes.
- Addresses this gap with a robust synthetic biology CDMO and AI fermentation platform. The company's approach streamlines the scale-up of high-performance microbial strains from lab trials to industrial production, mitigating the high costs and lengthy timelines typically associated with this transition. Leveraging diverse data sources and AI, Boston Bio's platform optimizes fermentation processes, significantly reducing the labor intensity and technical hurdles inherent in scaling up production.
- Led by a founder with a proven track record in scaling operations, benefiting from a blend of Fortune 500 production management expertise and start-up team-building skills. This unique combination positions it as a formidable player in the biotech sector, backed by a team of seasoned professionals dedicated to delivering reliable and practical solutions.

- **Company G**

- Produces sustainable aviation fuel (SAF) from biomass based on a new cobalt-based catalyst and a small-scale Fischer-Tropsch (FT) unit. Sustainable aviation fuel (SAF) is currently the most effective way to address carbon emissions in the aviation industry. Large aircraft are difficult to electrify or hydrogenate to reduce carbon in the short term. The Hydroprocessed Esters and Fatty Acids (HEFA) route, based on waste oils, is the mainstream approach, but its supply is limited and cannot meet the demand for SAF. The market urgently needs new production methods.
- Existing coal-to-liquid facilities use large-scale FT units. However, to match the distribution of biomass, small-scale FT units are needed, which are not economically efficient. Mature slurry bed reactors face the issue of separating reactants and catalysts. The new generation of cobalt-based catalysts, paired with a new type of small-scale FT reactor, has significantly improved the quality of FT oil, greatly reducing the cost of SAF. This method is expected to become the most mainstream production route.
- The team has grown rapidly and has been involved in developing cutting-edge FT chemical catalysis systems. They possess comprehensive professional skills, covering catalyst design, characterization, reactor design, and process parameter optimization.

They have developed a new generation of cobalt-based hybrid system catalysts from scratch and achieved promising pilot results.

- **Company N**

- The dairy industry urgently seeks to replicate breast milk's nutritional components in infant formula. The core nutrients in breast milk are primarily whey proteins like lactoferrin, alpha-lactalbumin, and osteopontin. For instance, lactoferrin's concentration in cow's milk is merely 150mg/L—less than 1/10 of that in the human body. Extracting 1 kilogram of high-purity lactoferrin typically requires 6,000 to 10,000 liters of milk, making it costly. These proteins benefit all age groups, finding applications not only in infant formula but also in the booming adult milk powder and health supplement markets, as well as pet and medical uses.
- Drawing on decades of microbial gene editing expertise, has swiftly developed methanol-induced and non-methanol-induced *Pichia pastoris* systems and an optimized secretion chassis. This innovation has rapidly achieved world-class productivity levels while simplifying separation and purification, significantly reducing protein synthesis costs. The team is highly specialized, with members fulfilling distinct roles and possessing a comprehensive skill set encompassing gene editing, strain screening, industrial-scale fermentation and purification, formula optimization, and clinical research.

- **Company BA**

- Committed to becoming the world's first Level 4 (L4) autonomous trucking company, providing mainline trucking services directly to shippers by addressing the technical implementation and operational challenges of L4 autonomous driving.
- The application of L4 autonomous driving in vertical scenarios has always been a direction of high interest for Linear. We continue to believe that as autonomous driving technology matures, many vertical fields will reveal significant opportunities. The U.S. trucking logistics market, where it operates, is one such promising sector.
- According to our market research, the market it is in is enormous. The United States, often referred to as a country built on highways, has road transportation accounting for 80% of the nation's logistics volume. The trucking market is vast, representing a trillion-dollar industry. The Class 8 trucking freight market, which it focuses on, is at least a \$400 billion sector. Moreover, with the growth of e-commerce in the U.S. and policies affecting supply chain operations in South America, the trucking logistics market is expected to continue expanding.
- Its self-developed Foundation4All algorithmic framework is among the earliest attempts worldwide to apply large model technology based on autoregressive

training methods to the field of autonomous driving. This approach significantly improves the efficiency of model construction and subsequent iteration feasibility compared to traditional end-to-end (E2E) or rule-based methods.

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

Content and Media Reports about Linear Capital

- The Linear angel round project [Hyperview](#) has completed hundreds of millions in C1 round financing, with Middle Eastern capital participating for four consecutive rounds.
- Linear's AI investment project Linear Bolt [continues to update our observations and insights about AIGC](#).
- For Linear's tenth anniversary, we made a video titled [Ten Years, Ten Questions](#). Harry Wang, our founder and CEO gave his reflection on the the past decade.
- Founders of several Linear portfolio companies have been selected for Fortune's [40 Under 40 Business Elite in China](#) list.
- [Zheng Can was interviewed by Geek Park](#) for an AI industry analysis report, summarizing AI investment in the first half of 2024.
- Linear Capital was selected as [Top 10 Early-Stage Venture Capital Institution in the Yangtze River Delta region](#) by ChinaVentures.com and received accolades as the [Most Admired Early-Stage Investment Institution](#) by Cyzone, the startup community news outlets. Harry Wang, Linear's founder and CEO, was named [Top Investor in the AI field in China for 2024](#) by 36Kr, and Linear's Partner Songyan Huang was recognized as [Top Investor in the Field of Embodied Intelligence in China](#) by 36Kr.

Events We Hosted and Joined

- Regarding AI application investment, we continued to host the *Today at Linear* brand event. In July 2024, we participated in the [AdventureX Hackathon](#), hosted an event on [How AI Startups Achieve Overseas Growth and Business Model Innovation](#), held a [Demo Day](#) and an event about [AI product overseas' strategies](#) in August, and co-hosted [a review on the implementation of AI applications](#) with Zhipu Corporate Venture Arm in September.

Best regards,

Linear Team