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The Secrets of Successful Private Equity Firms

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University of Chinese Academy of Sciences
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A MESSAGE FROM THE EDITORS

A lthough there are interesting empirical studies and models for private equity (PE) in the academic literature and many practical experiences from the PE industry, currently there is no professional publication that interacts between academia and practitioners in the PE field. This is the gap that this magazine, Private Equity Review, attempts to fill. More precisely, our vision is to make the magazine a platform on which both academic and industry people can freely exchange their latest views and ideas about PE, thus contributing to a healthy development of the PE industry.

To realize this vision, we have included four interesting sections in the magazine. First, we have a section of case studies/interviews to present both best practices in the PE industry and lessons learned from past experiences, which hopefully will form a basis for further academic studies of PE. This is represented by an article in the current issue by Antony Leung, the former Financial Secretary of Hong Kong and the former chairman of Blackstone Group’s Asian office. Secondly, we invite people to express their viewpoints on PE; in this issue we are fortunate to have an article from Mr. CHENG Siwei, who is regarded by many people as the founding father of the PE industry in China. The third section of the magazine is an in-depth analysis of current events that are of interest, e.g., the latest initial public offering by Alibaba as reported in this issue. The last, but not the least, is a section of technical papers written by academic people to disseminate academic researches to a wider audience.

The development of the PE industry currently faces great challenges. The solutions to these challenges may arise from innovations. We have in the past emphasized extensively the impacts of innovations on social evolution and economic development, and stressed the importance of PE industry in the innovation processes. But now we want to highlight that PE itself also needs innovations. We believe that our effort, including this magazine, is an innovation. In the future, the magazine will be broadened to become an interactive platform for PE, including professional conferences, data analytics, and rigorous studies, so that academics and practitioners can communicate and share their findings; or, in short, a true bridge between academia and industry. Hopefully such an interactive platform will promote PE innovations and will make a highly positive impact on PE research as well as PE practice in both regionally and globally.

Launching a new magazine is by no means an easy job. We are very grateful to many people, including the members of the editorial and advisory boards, who are from both academia and industry and are generous enough to devote their time and effort to ensure that the articles in the magazine have the best possible quality, and the staff members at both the Goss Institute of Research Management in Hong Kong and the Risk Management Institute in Singapore who help to maintain a high level of professionalism in the operational aspects of the magazine.

Finally, we thank you, the readers of the magazine, who are the ultimate supporters of the magazine and our vision.
Challenges and Opportunities
Facing the PE Industry After the Financial Crisis

SIWEI CHENG, School of Management, University of Chinese Academy of Sciences

Prof. Siwei Cheng was one of the earliest legislators advocating for private equity (PE) investment in China, and he is considered the founding father of China’s venture capital industry. Below is an edited transcription of the audio recordings of his speech delivered at the First GOSS International Forum on Private Equity held in 2013, where Prof. Cheng described the historical development of the legal infrastructure for PE investment in China, as well as impact of the financial crisis and the stimulus package, and current challenges facing China’s PE industry such as narrowing exit channels and a lack of qualified GP. The article concludes with a few suggestions for future directions.

HISTORY OF PE DEVELOPMENT IN CHINA
If we look at the historical PE development in China, there are three stages. The initial stage started in the year of 2000 when the National People’s Congress had a preliminary meeting in Ningbo to discuss the legislation of the investment fund law. At that time, I suggested the law of investment fund should include three parts. One part concerns the securities investment and securities fund. The second part concerns what we call industrial funds. The third part deals with venture capital funds. At that time, the term of “private” was rejected and in the end, this law became Securities Investment Fund Law, excluding private equity funds. To clear the obstacles to future PE development, we revised the securities law, company law and partnership law. In the partnership law, we added limited partnership in the revisions. In the securities law and company law, we left a leeway for future PE funds, allowing them two hundred shareholders so they could work legally under the company law.

The second phase of development was from 2005 to 2009. During that time the domestic PE funds mainly followed the limited partnership law as well as the company law. The foreign PE funds could invest in China on a case-by-case basis. At that time we held a closed-door forum for three years among only government officials, scholars and selected company CEOs. I was the honorary chairman and we discussed the pros and cons of developing PE in China. Some suggestions were offered to the State Commission of Planning and Development.

Before 2009, foreign funds were the major players. Because of the financial crisis, the situation changed after 2009. Domestic PE funds grew due to the stimulus package, which was originally four trillion but at the end amounted to 10 trillion RMB released to the market, and as a result the domestic PE funds enjoyed very fast growth with wonderful returns at that time. However, since last year, the situation changed along with the slowdown of the Chinese economy. In addition, PE firms are facing serious challenges due to other factors. The first challenge is that the exit channel has been narrowed, because IPO was stopped. Although there is a new third board, it cannot compare with the IPO, so PE firms can only exit through M&A. Therefore the channel is narrowing and also the return is being reduced for the PE firms. What would the solutions be? I think certainly we still need to wait for the IPO restart for some time, though not for long. However, the problem is in the relatively low confidence of investors, and hence I think the stock market in China will recover but at a very slow pace. Therefore, the PE ratio for IPO exits will not be as high as before. The situation for M&A exits may be a little better because the M&A valuation may be more objective. However, we still need to have very good GPs at the moment. The GP is the soul of a PE firm, and we need highly qualified GP to respond to the slowdown of PE return.
PRIVATE EQUITY REVIEW

Problems and Issues

Currently GPs are facing three problems. One is evaluation and feasibility study. During the period from 2009 to 2011, it was very easy to make money, and the decisions of GPs were mainly financial ones. They invested money in pre-IPO companies, and then after the companies went public, the GPs received high return.

Evidently, there was no value-added service but only monetary support was provided for the companies. Now the situation has changed. The GPs should provide value-added service for the companies they have invested in; namely, they should help the company not only in finance, but also in marketing, technology and management, which in turn requires the GP to have higher qualifications.

Another issue facing GPs is feasibility study. In the past, most GPs only looked at the technical and economic aspects of feasibility study. That is not enough. I put forward 6 feasibilities: technical, economic, legal, operational, scheduling, and last but not the least, the political feasibility. Some GPs failed because they did not pay attention to political feasibility. What is political feasibility? It is to consider the different benefits of different groups. You have to work with the government, with the society and community and other parties. Here are two examples. In the first case, we had a very good project on a chemical called PX, paraxylene, a raw material for PTA, which is a raw material for polyester fiber. However, some PE funds invested in this project and failed, because there is a rumor that PX was highly polluting, and the community said they would not have the plant in their city.

As a result, the project was moved from Xiamen to another city, but then people in another city also objected to the project, and at the end the project was transferred from Xiamen to Dalian to Ningbo and to other cities, delayed for several years. In the second example, there was a city where the former party secretary encouraged PE investment in a shopping center in the east side of that city, saying “we will focus our effort on developing the east side of the city and extend our city to the east side”. However, after the shopping center was built, the party secretary left and there came another leader who said, “It’s not right. We should develop the west side of our city.” Hence the direction of the wind changed. With the real estate development in the west side, the shopping center in the east side certainly became a failure.

This suggests that we have to pay attention to the political feasibility. Be careful when you are evaluating the opinions of local government officials and also those of the communities. PE firms should also understand the limits on the power of local government officials. Sometimes local government officials would make promises beyond their power to attract PE investment, but at the end they could not keep their promises. This is another problem.

The second important problem in decision-making is what we call dynamic asset pricing. Asset pricing usually refers to fixed asset pricing, tangible asset pricing, or intangible asset pricing, which is insufficient in my opinion. What we need is a dynamic way of asset pricing, which means we need to construct a scenario for the company’s future performance after three to five years. It is not enough to look at only the current prices of tangible and intangible assets when we perform valuation. We will need to have scenarios for the future trajectories of this company. In this way, even though for the time being the project may not seem so good, if you could see the future prosperous performance of the company, you would invest and succeed.

Last but not the least, we should put emphasis on fostering famous brands in China. According to corporate finance, normally the price of a product is equal to cost plus profit, but for famous brands this is not the case -- it is cost plus their business reputation, or company’s reputation. Sometimes the company’s reputation is much higher than its manufacturing costs. Take the ties for example. Some famous brands were produced in Shengzhou City of Zhejiang Province. Compared to local brands, certainly there are some differences in terms of internal quality, but the difference does not amount to the huge price gap. In Shengzhou, domestic ties can sell for around 288 RMB, and ties of some general famous brands can sell for 588-888 RMB, while the top brands can sell for 888-1288 RMB. The difference in internal quality is not so large, but the brand effect is quite significant.

Therefore, when a GP makes decisions to invest in a company, he should also look for such opportunities. If you can foster a famous brand, it will bring you much more return than usual.

LP in China

There is another problem facing the PE industry in China, which is the shortage of qualified LP due to the constraints
That's why we stopped the IPO for a certain period of time. Time you also have more IPOs, then the market will be hurt. Many IPOs, the overall market will go down, because if you hurt the confidence of investors. In this case, if we still have a transaction, and manipulation of stock prices, which heavily there emerge many issues with misled information, insider also a problem of Chinese listed companies, and as a result corporate governance index was only 60 against 100. This is University. According to their evaluation, the total average of I attended the corporate governance forum in Nankai Nankai Corporate Governance Index was set up. Recently so sooner or later, there would be a problem. Therefore, the company does not have good corporate governance, governance determines the quality of a listed company. If good financial performance.

However, from a long-term point of view, corporate governance determines the quality of a listed company. If the company does not have good corporate governance, sooner or later, there would be a problem. Therefore, the Nankai Corporate Governance Index was set up. Recently I attended the corporate governance forum in Nankai University. According to their evaluation, the total average of corporate governance index was only 60 against 100. This is also a problem of Chinese listed companies, and as a result there emerge many issues with misled information, insider transaction, and manipulation of stock prices, which heavily hurt the confidence of investors. In this case, if we still have many IPOs, the overall market will go down, because if you do not have more cash flow into the market, but at the same time you also have more IPOs, then the market will be hurt. That's why we stopped the IPO for a certain period of time.

IPO Halt

In the short term, stock price performance of listed companies reflects the financial performance of the companies. In the past, the P/E ratio was too high, so the E/P ratio was lower than the interest rate, which was a big problem. Some time ago we evaluated companies according to four criteria and we found out that only around 30% of the companies had good financial performance.

However, from a long-term point of view, corporate governance determines the quality of a listed company. If the company does not have good corporate governance, sooner or later, there would be a problem. Therefore, the Nankai Corporate Governance Index was set up. Recently I attended the corporate governance forum in Nankai University. According to their evaluation, the total average of corporate governance index was only 60 against 100. This is also a problem of Chinese listed companies, and as a result there emerge many issues with misled information, insider transaction, and manipulation of stock prices, which heavily hurt the confidence of investors. In this case, if we still have many IPOs, the overall market will go down, because if you do not have more cash flow into the market, but at the same time you also have more IPOs, then the market will be hurt. That's why we stopped the IPO for a certain period of time.

Another issue is that, unlike in other countries such as the United States where in times of financial crisis or economy slowdown the number of listed companies is reduced, in China the number of listed companies still grows under these conditions. The problem is owing to the fact that the market cannot play a role to encourage the good companies and to drive off the bad ones. Hence in this case if you start the IPO, there will be more companies, good or bad, that go into the market, and that will dilute the value of the market. However, I believe sooner or later we will restart IPO, because if we always close the door, good companies cannot come in, and we cannot have a better stock market.

Exits Through Secondary and M&A Deals

In the year of 1998, I already said we couldn’t just have one exit, IPO. However, at that time the P/E ratio was very high, which was a huge incentive for people to exit through IPO to take large profits, and nobody wanted to go through other exit routes such as M&A, MBO or other channels. However, now the situation has changed. The IPO is still an important exit for the PE funds, but the GPs should also improve the corporate governance of the target company before its IPO. The GPs should provide value-added services, which include the improvement of corporate governance. In my opinion, China's stock market can be healthier and more mature only when 70% of our listed companies have good corporate governance. China's stock market has a history of only 23 years, as opposed to the western stock markets with histories of over 100 years. Therefore we still need to explore how to develop our own stock market.

Regulation Outlook

Revisions of the Fund Law aiming to incorporate PE had begun in the last session of Congress, but there were a lot of conflicts. First of all, what would the governing entity be? Should it be the NDRC, CSRC, or the central bank? Furthermore, should the profits be taxed? As a result, revisions of the Fund Law were not completed in the last session. I believe that this session of Congress will carry on this task, and I believe it will incorporate PE, which might be better referred to as private equity funds. Basic issues about governing have also been clarified; in the future it may be governed by the CSRC. However, many of the details are still under discussion. Last year there was a meeting held in the National People’s Congress opened for comments and opinions, and a lot of PE funds opposed the original draft, so it may take some more time for the revisions to be completed.
GOSS Interviews Antony Leung: Secrets of Successful PE Firms

Interviewed by Professor Jeff Hong, City University of Hong Kong

Given that we have more information on hand than ordinary investors, it follows that we have to grapple with a wider range of issues and considerations. As a result, in positioning ourselves for PE investments, due diligence typically spans several weeks – even months. We have to research and analyse all relevant risks painstakingly; these include, among others, industry risk, political risk and overall economic risk. Meanwhile, we have to study the company in question from the legal, accounting and operating perspectives – their market share, client ratings, managerial competence, and so forth.

More often than not, we would enlist the services of third-party consultants (such as McKinsey and Bain) as well as industry specialists to probe our target’s prospects over at least the next five years. On what is in store for the future, we cannot – and will not – be satisfied with mere qualitative statements (such as good or not good). In general, we will not cease and desist until we have verifiable quantitative data or testable hypotheses suitably modelled. It is only after careful deliberation of all the pros and cons that we will actually take the plunge.

INVESTMENT THESIS

Secondly, before making an investment, we have to have a clear investment thesis; we need to know how the operation of the target company can be improved. There are many ways of making money. To single-mindedly cut back on costs may not, in the final analysis, augur well for the company. Thus, the importance of formulating an investment thesis cannot be exaggerated.

For instance, if we judge that the company has a predominant comparative advantage – even an absolute one – in its industry, we would seek to enhance or maximise its market share. Or, if there are reasons to believe that it has not been managed properly, we will have to consider changing management; the questions of how, who and when to install as replacements will, under the circumstances, immediately present themselves.

As an example, we replaced the chief executive officer (CEO) on day one of our acquisition of a hotel and resort group. Alternatively, if we are of the persuasion that the upstream and downstream activities of the target company
are out of sync, then in the run-up to our takeover, we will have already mapped out how to resynchronise things aright. If we deem their cost control as leaving much to be desired, we would try to lower costs.

The long and short of it is that we must, ex ante, have a crystal-clear investment theme and, once we are in, we have to have a 100-day plan already in place, rather than studying the situation ex post – and shilly-shallying.

Oftentimes, people have asked me which industry is worthy of their investment dollars or, put differently, what in my considered opinion, constitutes a “good” industry. As I have said on more than one occasion in the past, PE executives are – for want of a better term – opportunists: it may well be that only in businesses spurned by others that we could and would scour the unnoticed gems.

Market valuations in the “promising” industries tend to be rather high, perhaps even exorbitant. Even if you are buying at the behest of others, as often as not you have to acquire the company at a premium. How then can it possibly be cheap? So the more that it is the apple of others’ eye, the more disinterested we would be in the business in question.

Generally speaking, we would base our investment decisions on exiting according to mid-cycle multiples; that is to say, neither the best nor the worst but what has been obtained for the industry as a whole over the years in terms of the price to earnings ratio or the ratio of price to earnings before interest, taxes, depreciation and amortisation. We have to be reasonably certain of being able to exit with profit before actually investing; we cannot be dictated by the vagaries of the market.

COUNTERCYCLICAL OPERATION

A distinct advantage enjoyed by PE firms is that we can choose to enter and, for that matter, exit as and when we see fit and, generally we are countercyclical. The most formidable potential pitfall for investments is pro-cyclicality. Counter-cyclicity is arguably the quintessence of PE.

Unlike other conventional types of asset management, PE does not have to adopt the mark-to-market practice. The most common mistake of the average, small investor is to dump their investments during pessimistic downturns while, on the other hand, chasing prices higher during gung-ho bull phases. In consequence, they fall prey to the cardinal error of buying high and selling low.

Precisely because investors of PE companies cannot withdraw at random – that is to say, only the PE fund manager can decide when to enter and when to exit – we can eschew the market’s periodic irrational exuberance. When people exult in “good” times, we bow out and take to the sidelines. Conversely, when they recoil and take refuge from “bad” times, we spare no effort to identify and acquire businesses that denote value for money and which we can profitably unload onto the market in due course.

ACTIVE INVESTOR

Fourthly, private equiteers are active investors who can protect their interests as they see fit, not least by improving the operations of the companies in their portfolios. If you are a small, open-market investor, for sure you can buy what you like but you can only sell – willy-nilly – what is not to your liking. To PE companies, however, we can, if need be, have the company’s management replaced. When we commit ourselves to a business, most of the time we would request – and obtain – a controlling stake.

Even absent that, however, we have the corporate governance clauses to fall back on. So even if we were a minority shareholder, we would have strong say. As a significant investor, we have veto on certain crucial corporate activities, such as mergers and acquisitions, and change of key managers. In a nutshell, we are not a passive investor; we are as active an investor as can possibly be envisioned.

And generally speaking, as an active investor, we would – even before entry into the target business – conceive of the ways and means to weld together and synchronise the interests of management and shareholders. In any large enterprise, everybody would say that they are at the service of small stockholders. In fact, however, they have to face – and interface with – the board of directors (BoD).

Oftentimes, CEOs in foreign companies bring a significant influence to bear on the appointment of directors. In many large-scale companies, therefore, the BoD is preordained by management, and their interests could well be inconsistent with those of shareowners. In any company whose management leaves a lot to be desired, particularly because their interests do not jibe with those of stockholders, we would have it replaced with a view to augmenting profits inasmuch as possible – to the benefit of the company and its shareholders.

In sum, how to harmonise the interests of stockholders and management is an extremely important issue. And that, I think, just about wraps up the lessons of successful for PE practitioners, both at home and abroad.

PE Serves the Public Indirectly via Investment Profits

GOSS: From inception to date, PE on mainland China has been in existence for 10 years or so. But the bulk of the firms in the industry still do not seem to have grasped what the role and functions of PE are. They have lost their GPS (global positioning system), so to speak. Can you enlighten us on that front?

AL: In the light of the industry’s experience abroad, I believe that PE has at least two functions vis-a-vis economic
development. Firstly, PE is there to serve the people, albeit indirectly, with the one and only conduit being investment profits.

Before everything else, it should be made abundantly clear that PE companies work exclusively for their investors. They will pull out all the stops to augment the value of their investments and return the money to investors after exiting. Further, we have to generate a return in excess of the hurdle rate before we can deduct a certain percentage of the profits as our own remuneration.

People are often heard as saying that PE is at the disposal of those who are well-heeled. But that, in all fairness, is a misunderstanding – a myth, if you will. On average, around 10% all the funds managed by Blackstone belong to individual investors. The rest – 90% or above – are from institutional investors. Now, who are these institutional investors? They are in the main pension funds, university endowments and insurance companies; all of them (not least insurance policies) have to do with the public at large. It can be argued, therefore, that PE predominantly serves the people – the masses, if you like.

While in effect “serving the people”, PE is different from other instruments and vehicles. In some economic entities, the conventional wisdom and practice is that for as long as any pursuit can boost statistical GDP (gross domestic product), then let us by all means plough in zillions as investment. But PE is predicated on the free and fair play of market conditions. Provided that everything is legal, operating in accordance with market forces should be a boon to the economy in the long run. This is because, under most circumstances, markets comprise the best resource allocator. And this, in turn, is due to the fact that markets represent a plurality of interests, not those of any one particular individual or organisation.

Another function of PE is to assist underperforming enterprises improve their operations, thereby indirectly fostering competition within their respective industries. Without PE, a company that is not well-managed may forever be consigned to underperformance and obscurity. As PE practitioners, however, if we feel that this or that company is not up to par, we will have it taken over with a price premium to have it privatised; this is what we would arrange it to be publicly listed or sold to other investors. The whole process is highly conducive to the enhancement of economic efficiency.

All things considered, PE has metamorphosed from the marginal player of several decades ago to the mainstreamer that it is today. Nowadays, when companies are in need of raising capital, they do not necessarily have to rely on the listed market; increasingly they can tap upon PE for funding. To many enterprises, moreover, while there is permanent capital to be had from the open, public market, it is not without problems and drawbacks, the most significant and notable of which is that listed companies abroad have to report their results every quarter. That is not always the case with their counterparts in China. The latter, however, are still subject to short-term pressures from the stock market, as a result of which their management could become parochial and myopic.

In the wake of our privatisation of many companies, their management more infrequently hail the move as a boon, as they can then adopt and implement decisions that will prove beneficial to shareholders over the long haul but which may bring downward pressure to bear on stock prices in the short run.

Let me illustrate this with an example. Market conditions and developments may unfold in such a way that you need to raise capital – and a lot of it to boot. But stockholders may baulk at massive issuance of new shares as the price of the stock may be weighed down by the added new supply. But after we have entered a company, it is exceptionally rare that we would take to our heels after, say, one quarter or two; rather, from entry to exit, it is typically 5-½ to 7 years.

Thus, many companies have good reasons to believe that they are immune from short-term pressures. They would, therefore, be more inclined to do things that are in the interests of shareholders in the long run. This is harder to come by in listed companies. And that is probably why the results and performance of PE-held companies are heads and shoulders above listed enterprises. According to some research, from return on investment to expenditure ratio on research and development, from the levels and growth of profits to job vacancies, PE-run businesses would almost invariably thrive and excel.

**As Reform Deepens in China, It Pays to Have PE-Led Takeovers**

**GOSS:** In your considered opinion, what role does PE have in China’s economic development and restructuring?

**AL:** My inclination is that, with the motherland intent on deepening economic reforms, it pays to have PE firms embark upon some controlling takeovers. But then if an industry is comprised principally of state-owned enterprises (SOEs), or if SOEs comingle with private enterprises, things will become more complicated and nettlesome.

That is because the cost of capital of SOEs is a different kettle of fish compared to ours. Our cost of capital is rather exorbitant. That is due to the fact that we have to surpass the 8% hurdle rate every year before we can
partake in the sharing of profits. In other words, there is a relatively high bar set for the relevant compound annual growth rate.

On the other hand, however, SOEs are different. To borrow the words of many an economist, their cost of capital verges on zero. And the hurdle rate set by the government is also apt to be different. If SOEs flounder profit-wise, government is unlikely to be there to shelter; there would, at the most, be a change of management, whose interests are not, after all, directly linked to those of shareholders: SOEs are at the service of the people from a macro perspective but there is no financial requirement (or hurdle) as such.

I recall that in the days of yore, many banks, the annual growth rate of whose profits was twenty something per cent, still had to cut salaries in the interest of social stability. Further, being what they are (i.e. state-owned), SOEs have a head start on civilian enterprises, be it in terms of business or capital. This poses a formidable challenge for those of us investing on the mainland.

Particularly in China, the chief economic contribution of PE has to do with the evolution and development of financial markets. Previously, the distribution of capital was outsized at the two ends but diminutive in the middle. What I mean by this is that money was to be had either from the banks or from the open equity market. Things are now gradually improving but banks still account for a whopping 90% of financial market activity in China.

Be it pension assets or insurance funds, when need arises for long-term investing, high return is not the sole consideration; relative stability is also to be reckoned with. If we buy stocks from the open market, problem is sometimes there are new issues, sometimes not. What is more, the capital markets in China are not completely open. Share prices are sometimes unreasonably high and sometimes unduly low.

Meanwhile, the interest return from short-term bank deposits is minuscule. National debt yields a shade more but the emphasis is probably advisedly placed on "a shade" rather than on "more". Under the circumstances, the entire structure of capital markets is far from perfect. By comparison, PE is a better and longer-term investment option. Besides, a PE manager who lives up to his task can typically deliver a return that is above those of bonds and stocks, satisfying the needs and requirements of long-term investors.

At the present juncture, China’s long-term funds are accumulating gradually; insurance funds and the social security fund together add up to sizeable amounts. I would have thought that these long-term institutional investors are scratching around for inspiring investment instruments. PE presents long-term investors with an alternative asset class; its usefulness and constructiveness should be duly acknowledged.

There is Genuine Demand for PE in China

GOSS: From where you sit, how do you see PE panning out in China?

AL: I envisage several trends unfolding in times ahead. Firstly, China’s long-term assets are accumulating. Because society is ageing faster than heretofore, the nationwide social security fund will continue to grow by leaps and bounds as conceivably will civilian pension and insurance fund assets. On the one hand, they need relatively high rates of return; on the other, they have to shelter themselves inasmuch as possible from short-term market fluctuations. Put differently, there is – and should be – genuine demand for good PE companies in China.

Secondly, as I have mentioned earlier, China’s is deepening its economic reforms – and in earnest. How do SOEs enhance their effectiveness and efficiency? Does every industry have to be spearheaded by SOEs? Given the chance, PE will provide a good deal of inspiration or at least food for thought with regard to augmenting enterprise value and productivity.

Thirdly, capital markets in China are relatively simplistic at present. Either banks are to be tapped for capital or the open equity market is the place to be; or, if they both prove to be unforthcoming, kith and kin have to be approached. Formerly, the lion’s share of PE managers was engrossed with pre-IPOs (initial public offerings). Now, it is worth our while to ponder if there is room for development and expansion of PE for mergers and takeovers.

I should hasten to add that, if the answer to the above proposition is in the affirmative, we cannot be fixated on opportunities alone; we also need changes in other links and spheres, including how to regulate PE. This must be carefully mapped out. At least we now know that it is the China Securities Regulatory Commission that is the industry watchdog. But specifically how to regulate the industry has yet to be thrashed out. I am inclined towards a markets-led approach. That is to say, above everything else, the regulatory authorities have to seek to protect the investors involved. A second consideration would be how to ensure that the management of a given PE company is above-board and kosher rather than a sham and a fraud.

In the meantime, I would hope that a good investor can draw lessons and glean insights from various quarters and not just settling great store by academic degrees and credentials. The importance of education and scholarly pursuit cannot be gainsaid but between university degrees and practical experience, which is of greater significance? This is food for thought indeed and it pays us to keep the issues involved in perspective.
How Persistent is PE Performance?  
Evidence from Deal-Level Data

TIM JENKINSON, Saïd Business School, Oxford University

1. INTRODUCTION

I’ve been teaching private equity courses in Beijing for the last few years as a way to try to find out what is going on in the Chinese market, and I’d love to be able to tell you that I was going to present you a lot of data about the Chinese market, but I’m not sure it exists. I keep looking forward, and hopefully in the next few years, we will be able to come back and tell you a bit about the evidence from Chinese PE on a consistent basis. However, I’m actually going to talk on the whole about what we can learn about private equity from the rest of the world or where we can get data about the performance of funds.

For a conference like this, which is actually about decision making in private equity, I think there are, if you like, two big decisions, which people have to make when they are involved in this industry, because this industry will only exist if investors make money. The first big question is what the returns are from the private equity over long periods of time, measured in an objective way and not taking just isolated examples but also looking at the deals that get wrong. I think that a lot of academic researches have been dedicated over the last few years, and it’s generally shown that in the big markets which have existed for a long while, like the US and Europe, private equity does outperform public markets. Some of the research I’ve done suggested that the outperformance was on average about three to four percentage points a year, which is one of the reasons why investors are so interested in private equity, and why in countries like China, I think there is an understandable enthusiasm for encouraging the private equity industry.

The second major question people ask is, if I’m going to put my hard-earned money or my pension funds or endowments into private equity, how do you actually choose the funds? What indicators can you use? It’s fine to say I want to put twenty percent into private equity. Then what do you do? How do you choose the funds? One of the established wisdoms in the west is that fund performance tends to be persistent over time. Thus if you had a very good fund, there is a high probability that your next fund will be good.

Therefore, one of the ways in which investors can make their decisions is really to invest in previously high performing funds in the hope that they will perform well in the future, and it’s that question I’m going to really look at today. I will try to analyze and review some of the evidence on that, so that’s really more what my talk is about.

I’m going to talk about a particular piece of research, which we’ve just produced, which looks at a very large set of data, based upon actual deals, not just by funds, but by deals at the deal level. This research has been conducted with Reiner Braun and Ingo Stoff. We are going to look at the performance, both in absolute terms and also in relative terms, because in this industry, everybody refers to their performance in terms of which quartile they are in. There’s an old joke in the private equity industry, which is that every private equity fund is top quartile. In fact, I’ve never met a private equity manager, who was not top quartile. Hence, what we are going to do is that we actually create those quartile rankings for funds and their deals, and track them over time. We are going to look at this relative performance and absolute performance, and see really how it is changed over time and whether it changes with experience. You might think that experience is a good thing. As I get older, I hope that’s the case, as I get more experience, but of course experience might not be a good thing, because experience could lead you to becoming less hungry. Private equity is a rich game. Many fund managers get rather rich as a result especially if they are successful. Thus, do you want to give your money to somebody who’s been going through ten, fifteen years and is already pretty rich? Or do you give it to the young hungry fund? We are going to give you some evidence on that.

There is existing literature on this, which I’m not going to summarize, and some of this presentation will be a little bit more academic and I’m going to skip over a lot of that stuff for those who are not interested in that, but I think there is a fair amount of evidence which suggested so far that performance is persistent over time. There is a classic article by Kaplan and Schoar, which actually did suggest that private equity performance had a high level persistence, in both venture capital and buyout. However, more recently there have been some doubts raised by that, and a couple of papers, including the one that I wrote with Robert Harris and Steve Kaplan, actually find rather low persistence more recently. This also links to whether investors can outperform, because there’s been some evidence that particular types of investors do better private equity investing than others. In particular they found that endowments and some of those
We also deal with some of our problems that funds, the legal deals up at any levels of frequency we want, which we do. Another issue is if you look at frequency in most financial assets, you look at frequency on a daily, intra-daily, minute by minute, monthly basis, but of course with private equity, if you only look at funds, funds have a ten-year life. Looking at the persistence on a ten-year basis is a very restrictive thing to do. With the deal level data, we can bundle these deals up at any levels of frequency we want, which we do. We also deal with some of our problems that funds, the legal

"A GP does a whole load of deals over time, and what they do is that they put them into fund, so they put a legal wrapper around these deals."

Another problem in this game is that funds refer themselves by vintage year. They say we are a 2007 fund, but actually the way funds define their vintage year differs hugely. Some people say that it’s the first investment, some people say it’s the first close, there are lots of different ways. We can construct vintage years very accurately. The vintage years are when they are doing their investments and we weight that by capital. Hence it’s the capital weighted time that you actually did the deals, so I think it’s very natural, and it also gives us a way of controlling for some of the factors. We have detailed information about deals, which industry they are in, which country, so we can actually make a lot more control for what’s going on at the same time at different places in the world. We essentially slice our analysis into three. We look at how they vary over time by GP, by experience, and by performance quartiles. So we can look at some of these underlying drivers.

Just to give you a sense of where we are going, what we find is that in the whole sample we find the experienced GPs show some high level of performance persistence, but we find that this is actually dropped over time significantly. We find that from the early part of the period to the late part of the period, the persistence is really dropped away pretty significantly, and that’s particularly true and really driven by the experienced GPs who used to have rather persistent returns where there was a 52% chance of repeating top quartile performance between these groups of deals. That’s now dropped significantly to only about 20%, which is actually less than random because you expect the number to be 25%. So in a nutshell, what we’ve got to is the situation where private equity seems to conform to the pattern we see in most other financial assets where past performance isn’t a very good predictor in the future. That’s where we are going to and I will give you a sense of how we got those results.

3. THE DATA
I want to focus just for a minute on the data, because data is critical to the understanding of any phenomenon or industry, and this is one of the areas where in China and Asia more generally, we need better data, consistent data. What we have in these data sets is the returns for seven hundred and twenty six buyout funds. You will see they split out, mostly from Europe and the US, but there are thirty-nine Asian funds in it as well. Those funds have nearly eleven thousand portfolio companies in them, of which about six and a half thousand are fully realized. Their cash on cash returns and the investments were made over something just over thirty five year period. Now the critical thing is we
actually have cash flow data on these. We know when the money went in and we know when it came out and that’s very rare. Nobody has had this type of data before at the deal level, and we know deal sector, location, funds, the GP, etc. This data came from the due diligence of some fund of funds managers who, when GPs came and asked them for money, asked them for their entire back history of deals. It is important to know these are not the funds that the fund of funds managers chose, but just simply the ones they considered, so these are not biased in any way. As a result, it’s not reflecting the views of how good these GPs’ work are by the fund of funds. It just reflects who knocked on the door and asked for money, so I don’t think that there are too many biases with this data. Especially it seems most of the data was raised between 2007 and 2010 while it was incredibly hard to raise money, so almost all GPs were out there trying to raise money in that period and they would look at these big funds of funds managers as a good source of capital.

Clearly though, there will be some biases because anybody who raised the fund and then dropped out won’t enter into our data set, so if they already died by 2007 then we are not going to see them. We don’t really talk about returns here. We talk about persistence, and in a sense it’s not really interesting whether a fund that has died was persistent, so we are really looking at the persistence of the funds which are currently out there in the market. I think there was a really unprecedented level of completeness in this data and in this result. For 88% of the funds we have their complete sequence of deals, and where we don’t, we just interpolate the numbers, so I think this is great data and so much as good as I think it’s better than any data that I’ve seen on private equity in terms of its completeness.

What that means is if you look at the deals sequence (as in Figure 1), which is how many deals that particular GP has done, that was on vertical axis and the year, its shows a nice pattern, you can see the amount of deals, and the sequence is going up over time, you see GP is becoming more experienced, but we’ve got a nice spread of deals over these thirty-year period. Now what we then do is we take these deals, and if you like, these dots are the individual deals we see for a GP and we put them into little funds. We don’t look at it on a deal by deal basis because that would be all over the place, and the volatility would be very high. What we do is we exclude all the unrealized deals and we put them into little portfolio of eight deals. We choose eight because eight deals is about the number that you do before you go and ask for money again. You do eight deals and you go and ask for more money. We basically take the deals and we put them into what we call synthetic funds. These are really little portfolios of deals, so we’re choosing a high level of frequency to look at persistence. We end up having chopped away all the deals which have not completed, have not return their cash, and we end up with 785 synthetic portfolios. We look at how these portfolios perform over time. Some of these are first time funds, so they don’t always have any prior funds. So you can see why you need so much data to do this because you keep losing along the way. You lose your unrealized deals and you lose the first time funds and the like. We end up with 560 funds which have a previous fund, synthetic fund.

4. THE RESULTS

We split the sample into low and high experience and early and late in time. What we do is we look at things like performance quartile, so if you look at a particular set of funds, we rank them according to their performance and this is what a lot of information providers do as well. They compare the performance of funds across with other funds. In addition, we rank them according to certain measures. We tend to use what is called public market equivalent returns, so we measure how well they did relative to public markets.
That is what most academics believe the most appropriate way to judge private equity. Practitioners tend to focus on IRRs and money multiples, and we could debate why those, I think particularly IRRs, are less interesting, but I’ll leave that until later. What we do then is we put them into quartiles, and then we see how they perform over time. That is, if you are in the 1983 set, fund XYZ was in the above average quartile and in its next fund, that’s 1987 fund, it’s also in the above average quartile, then that would be a persistent performance over time. What we do is very simple as we always do in the sense we take those rankings and we track them over time and see if they stay in the same quartile or they change over time, because this is what investors want to know. I’m not going to get into the academic side, which the academic audience may appreciate while others won’t. What we do is we look at how these performance measures evolve over time, simply by looking at whether the lagged performance predicts the future. We do find we can sort of replicate prior results that show that across the whole sample, there does seem to be some persistence in which quartile you are. However, when we actually split it into the early and late markets, we find it was really only there in the early market. It is just looking at absolute performance persistence at this stage. This is the first indication that things might have changed in recent years in the private equity market.

Perhaps a more intuitive way of looking at these though is to focus on relative performance, because in that way you can create large buckets of these quartiles and just look at quartile performance, and then see how that changes over time, and I think that many in the industry find this by far the most intuitive way in thinking about performance and how that changes. What I’ve done here is to put up what is called transition matrices and what these tell you is what the performance of the previous fund was and what the performance of the next fund is along the horizontal axis, so for example what it tells you is in the sample as a whole, if you are top quartile last fund, there was a 34% chance you would be top quartile the next fund. Similarly, if you look at the bottom, there was a 35.7% chance that if you were a fourth quartile (or flop quartile) last time, you are going to be a fourth quartile the next time. We do that for all the different performance measures, and that tells you that at least in the whole sample there was quite a lot of performance persistence.

Now as I say, the real question in our mind was how that changes over time and how does it change with experience as well, so what we then do is we look at the performance by quartile, and we split out the relative performance and look at whether top quartile is more persistent than the bottom quartile etc. We actually find the persistence is there to some extent in the top and bottom quartiles, but if you put in a dummy for whether or not it’s an early or late fund, and you also split it according to whether there’s an experienced or inexperienced manager, you start seeing that there was more persistence with the experienced managers, and there was more persistence in the early years than the late years. You can do this, and you can run these rather complicated regressions, and you find that if you split the sample, you do find that most of the persistence was in the early years and they seem to disappear in the late years. This is for all funds together, but you could also look at this at the level of individual quartiles, because you might be wanting to know how that evolves over time.

Thus what we do is we look at these by quartile and see where the persistence is or was, and we compare them by time, over time and over experience. I am going to just focus in on a few bits of this little chart in Figure 2 and try to explain what they mean. In addition, I’m only going to focus on the results of public market returns, namely how they perform relative to public market, but we get similar results for money multiples and IRRs. Let’s just zoom in on the bit of this chart for a minute. Let’s look up of the top right hand part. What this shows you is that it looks across time and fund sequence. The area in the middle says that across the whole of all these funds there was a 29% chance of staying in the same quartile next fund, not much greater than random actually over the whole of the sample, but there was higher performance persistence for the experienced GPs, because the higher experienced ones are the ones at the
bottom of that square. There is a 33% probability that highly experienced manager would stand in the same quartile, and 25% probability for the low-experienced managers. You can also see that across the whole sample this has gone down over time because in the early years there was about 32% chance of staying in the same quartile now going down close to random, 26%. That’s over the whole of the sample.

Most people are interested in the top quartile and how top quartile funds do, because we just talk about all the funds at this stage. The answer is, if you zoom in on the top quartile, you see some very interesting results. Because we use this regression framework, we can actually also talk about statistical significance of these results. Are they statistically significantly different over time? What we find here is that there has been a huge difference in top quartile persistence between the early and late years for the low and high experience managers. For example, in the early years, before the late 1990’s, if you are an experienced manager, there was about 50% chance that you would repeat top quartile performance, so it is a very high level of persistence. However, since the late 1990’s, the probability of these experienced managers repeating top quartile performance has gone down to 21%, even lower than random, bizarrely.

On the other hand, for the low experienced managers, the ones who got less than medium level of experience actually haven’t changed, so all these reductions in top quartile persistence seems to be coming from the highly experienced managers. The experienced mangers did have repeated good performance but they seem to in some ways lost their edge, compared to other managers. Then, what about in the middle? We don’t see so many interesting things in the middle, but we do see the experienced managers now seem to be more persistent around average performance, so they have a slightly high level of persistence, but there are not much going on in the middle.

However, there is in the bottom quartile as well, while I think these are really interesting results, because one of the mysteries of this world is why there is such a high level of bottom quartile persistence? Why don’t these people die? Why don’t the funds disappear? Right? Darwinian theory tells you that weak should no longer exist in this world and yet we actually found that in the early years there was a lot of bottom quartile persistence. There was almost 48% chance that experienced fund managers who had really bad performance would repeat bad performance. Then, we’ve seen that it had actually dropped from 48% to 38%, but it’s still quite high. So among the experienced GPs in the private equity sector, the persistently bad performers remain persistently bad, just a little bit less than they were. It seems to be concentrated amongst the highly experienced funds, the funds that have done a lot of deals.

Therefore this makes fund selection strategy for the investors quite tricky, because we found that there has been this reduction in persistence and it means then at least for these buyout funds we are focusing on, which is the majority of market in terms of cash, there has been mean reversion in the returns. Consequently your due diligence can’t just be how good these funds are, you will have to know how well they did in the past.

5. FUNDS SELECTION STRATEGY
Choosing fund managers is a major issue for investors. You decide you want to invest in private equity, but how do you choose a manager? If you can’t use past performance which is at least hard quantitative measures, then what do you use? Thus I think the results of this research suggest just sticking to the previously top quartile funds is no longer really very advisable or a recipe for success, and the investors should look at the organizational structure of these funds, who did the deals, whether the GP is getting rather old, and whether they are a bit too rich. Have they spread the economics of the fund? Do you know the new important members of their team, who are going to be the future, and who are going to be doing the deals for the next ten years? Therefore I think that it actually raises some interesting questions about how LPs should choose funds. It’s not just on the basis of what they did well in the past, but what they will probably do well in the future. I wish there was an easy answer, but it actually makes it almost more difficult for LPs’ decision-making.

(This article is the speech Mr. Jenkinson delivered at the First GOSS International Forum on Private Equity in 2013.)
Why Private Equity Favors Xiaomi

QUANJIAN GAO and LIANGYAN WANG,
GOSS Institute of Research Management and Shanghai Jiaotong University

1. BACKGROUND INFORMATION
Beijing Xiaomi Technology Co., Ltd. (hereafter MI) is a mobile Internet company that focuses on the research and development (R&D) of high-end smart phones. The Xiaomi Phones, MIUI, and Mi Talk are the core business products of MI (logo of Xiaomi) under the product concept of “Just For Fans”. The Internet model for a mobile phone operating system originated from the company.

Since its founding in April 2010, MI has been undergoing tremendous growth in terms of financing while focusing on only one financing agreement per year. In 2010, the company accomplished its first financing project of $41 million, with a valuation of $250 million; Morningside, Qiming, and IDG were its investors. By the end of 2011, MI finished its second round of financing of $90 million with a valuation of $1 billion with Qiming, IDG, Shunwei Fund, Temasek, Qualcomm, and Morningside as investors. In June 2012, the third-round financing of MI succeeded with a valuation of $4 billion. Evidently, the MI valuation quadrupled in each round. In August 2013, the amount of financing was not disclosed, but Xiaomi’s founder Jun Lei hinted that the valuation surpassed $10 billion; Xiaomi is now among the few domestic Internet companies with a valuation of more than $10 billion, joining the ranks of Tencent, Alibaba, and Baidu. The money from the fourth-round financing is principally for recruiting talents and undertaking a new round of mergers.

The $10 billion valuation of the Chinese company Xiaomi exceeded public expectations. Premier Keqiang Li reportedly scoffed at Jun Lei when he said, “Millet (Xiaomi) has grown into rice.” From the consumer’s viewpoint, this paper interprets and discusses why PE firms favor Xiaomi.

2. FEATURES OF MI
2.1 Market
PE firms assess the markets that potential portfolio companies belong to, prior to selecting investment projects. MI is favored by investors principally for its better development in the market.

In the context of rapid economic and technological development, mobile phones have become necessities and not merely luxury items. These electronic communication devices are carried by people everywhere they go and continually updated to meet consumer demands. Smart phones, in particular, suit the psychological needs of users and provide numerous value-added services that attract a large customer base. On January 17, 2014, Xiaomi Chairman Jun Lei and Tencent Chairman Huateng Ma spoke highly of the role of the Internet in economic transformation and modernization. In 2013, Baidu reported that the number of daily active Android users sharply increased from 30 million by the end of 2011 to 270 million by the third quarter of 2013, showing a quarterly compound growth rate of 37%. From either the national policy or consumer level, the data indicate a vigorous mobile Internet market represented by the smart phones.

This market entices several domestic and overseas companies to compete in China, where the market share has been principally captured by Apple, Samsung and many other foreign brands. According to the semi-annual report on mobile Internet in China by Umeng (2013), the intelligent terminals of Apple and Samsung have gained almost half of the market share among the top 10 brands. In an empirical analysis, Jinhua Guo (2007) indicated that the product selection of consumers in the mobile phone market in China...
is affected by the image they have on the country of origin of the products; the functional profile of products exhibits a dominant effect, whereas ethnocentrism has a moderating effect. Chinese consumers have a higher valuation of mobile phone functionality for brands from the United States, Japan, and Korea than those from China, thereby indicating the reason behind the larger share of foreign brands in the mobile phone market in China compared to local brands. Mobile phones produced by domestic brands require a functional profile that satisfies consumer demands. Moreover, the ethnocentrism of consumers can be inspired to increase their confidence in the local companies.

Using market segmentation and accurate market positioning, MI started from the blank spots in the mobile phone industry. MI developed a cellular phone operating system with high-quality user experience that satisfies consumer demands for both hardware and software through constant interaction with consumers. It likewise prevented imitation by competitors through advantageous pricing, maximizing the Internet marketing channel, and using a creative business model, thus expanding its market share in the fiercely competitive cellular phone market. According to the data provided by Umeng, the market share of MI is steadily growing by 1% semi-annually. At the end of 2013, the growth has reached 6.78%. The proliferation of smart phones has slowed down the turnover rate of cellular phones. Baidu reported that the quarterly growth rate of Android users has decreased from 50% one year ago to approximately 20% at present. Therefore, MI has constantly expanded its business and focused on smart home products. The market size of smart home products reached 42 billion in 2010. The growth rate is expected to exceed 20% from 2010 to 2015, and the market size is expected to reach 138 billion by 2015.

Considering the growth of MI and the participation of Former Android Global Vice President Hugo Barra, the opportunity for overseas expansion of MI becomes apparent. A global vision combined with the expansion of international relationship would increase the market space for MI and simultaneously promote the consumer perceived value of the company, thereby strengthening and increasing the market value of MI.

2.2 Growth
In pursuing an ideal rate of return on the investment, PE needs to investigate the growth of a company in which it would invest. The strong performance of MI in terms of revenue, shipment, and number of users indicates high growth.

2.2.1 Revenue
The revenue of MI was only 500 million RMB in 2011 but increased to 12.6 billion RMB in 2012 (6.7 billion RMB in the first half of the year and 6.9 billion RMB in the latter half). The revenue reached 13.27 billion RMB in the first half of 2013, which exceeded the annual revenue in 2012, and 18.33 billion RMB in the latter half, which was 5.06 billion RMB higher than the revenue in the first half of the year. The total revenue in 2013 showed an increase by 158% from the 2012 figures. In the annual meeting of Chinese enterprise leaders, Jun Lei promised with 99% certainty that the revenue of MI would reach 50 billion RMB in 2014.

2.2.2 Cell Phone Shipment
The cell phone shipment of MI in 2011 was 400,000 and reached 7.19 million in 2012. In 2013, the company shipment reached 18.7 million, with year-on-year growth of 160%. The shipment growth of MI in the last two years is impressive principally for the increase of its brand popularity, word-of-mouth promotion of fans, and the cooperation with Foxconn as an original equipment manufacturer that increased capacity.

2.2.3 Market Share
According to the data of Umeng Index, the market share of MI was 3.24% in June 2012 and increased to 4.6% by the end of 2012. In the first half of 2013, the number climbed...
to 5.79%, and reached 6.87% by the end of 2013. The growth is stable at approximately 1% semi-annually.

2.2.4 MIUI

MIUI (a highly customizable ROM that can be flashed across multiple Android devices) allows for the differentiation competition of MI. At the beginning of 2013, the number of users reached 10 million, and the monthly revenue was also 10 million RMB. By the end of the year, the number of users reached 30 million, and the monthly revenue also breached 30 million RMB. Xiaomi Co-founder and Vice President Feng Hong indicated that the size of the user population of MI grew from 0 to 10 million in two and a half years, and the population expanded to 20 million half a year later. Moreover, the remarkable growth in the number of users from 20 million to 30 million was achieved in only five months.

2.2.5 Diversified Expansion

MI has undergone continuous growth since owning a space in the cellular phone market. It established brand loyalty from the core fans in the MIUI system at a time when it was developing its own market. Consumer perception of MI’s high product quality, brand popularity, stable price, and excellent user experience all promoted customer loyalty to MI. A promise that is not easily affected by the situation and marketing efforts (Oliver, 1999), brand loyalty is an important independent factor that constitutes brand equity (Aaker, 2009) and increases sales in the short term (O’Brien & Jones, 1995) and good word-of-mouth utility in the long term (Reichheld, 1996). MI expanded its market for its new products using this approach and gradually unfolded its plan of vast development space and sufficient investment value.

From the Mi Box to the Mi TV, MI is expanding its business from smart phones to smart homes. Jun Lei stated that the disadvantages of cell phones compared with laptops lied in the input and the output. That is, the input of data on a cellular phone is not as convenient as the input using a computer keyboard, and the limited screen size designed for the portability of cellular phones affects the output. The TV can compensate for these deficiencies. This logic helps the company develop new products; MI is capable of predicting the popular “star” in the lives of people and then subsequently produces it. Using the driving force of the cellular phone market, MI starts claiming a territory in the housing market. Ahluwali, Unnava, and Burnkrant (2001) argue that consumers tend to minimize negative information and maximize the advantages of a brand that offers better promises than the others.

Thus, when MI expanded its business to the housing market using high-cost performance, the rush of its fans in purchasing and the discussion in social media piqued the interest of the public. The MI router has attracted the attention of the media and the so-called “geeks” prior to its scheduled release. Every media network rushes to beat the others in reporting the price and the configuration of the said router. On the day of the launch, the search index of Baidu reached 3629. Prior to the launch of the first public beta of MI on December 19, 2013, 374 news stories reported the gimmick on the Internet, telling people that they only had to spend one RMB to experience the new product of MI on December 16 and 17, 2013. After the fourth-round financing of MI, Jun Lei revealed that the company has sufficient funds for its operations, and that the money that had been raised by then would be used for mergers with the potential to expand the market. Therefore, MI has gradually evolved from a follower to one of the leaders in the future development of smart devices.

2.3 Trump Card of MI

The mobile Internet industry is flourishing, and each company promotes its advantages over the competition, especially in the manufacturing of domestic mobile phones. Among the accomplishments of these companies is the development of remarkable product properties and controlled cost, thus resulting in approximately 2,000 top-level products with reasonable prices. Despite the high-cost performance strategy, MI stood out from “China Cool Union,” won PE firms’ favor, and achieved a significant rapid growth because of its unique business idea, that is, the perfect combination of “triathlon.”

Jun Lei constantly declares that “triathlon” is composed of “hardware, software, and Internet service.” The hardware and software are traditionally within the domain of engineers.

"When MI expanded its business to the housing market using high-cost performance, the rush of its fans in purchasing and the discussion in social media piqued the interest of the public."
KingSoft CEO Sheng Fu (2013) believes that engineers “would spend much effort on products, and are unwilling to give up many of their functions. They have no idea that users will only accept the simplest points.” Thus, MI maximizes the crowdsourcing features of the Internet and establishes a bridge between users and engineers. This approach forms the core competitiveness of MI.

2.3.1 Hardware

With regard to hardware, the most attractive aspect of MI is its “high value for money” (high configuration and low price) product. Among the top configurations are “Qualcomm latest quad-core processors,” “1080P high resolution IPS screen,” “13 million megapixel camera with dual LED flashes,” and “Ultra-thin 8.1 mm phone body.” Samsung S4 and MI cellular phones have similar configurations; however, a Samsung S4 costs approximately 4,000 RMB, whereas the MI cell phone costs only 1,999 RMB. This “high value for money” hardware surprised the competitors of MI when the first generation of MI products was launched and attracted numerous customers. The innovative competitive strategy of MI likewise motivated other domestic cell phone manufacturers to follow suit and launch high-configuration but low-priced products.

The mobile phone market has gradually developed a strategy for manufacturing a wide range of products, including high-end products costing approximately 5,000 RMB, such as Apple; high-premium products costing approximately 4,000 RMB and intermediate, mid-range products costing 2,000 RMB, such as Samsung; high-configuration, mid-range products costing 2,000 RMB, such as MI and Meizu; and low-configuration, low-priced products, such as the homebred brand “China Cool Union.”

In an empirical study, Phillips (1983) indicated that high-quality products across business types can indirectly increase the return on investment through the effect on market position. Although enterprises realize the importance of product quality, many of these enterprises measure quality from their own perspective.

Zeithaml (1988) pointed out that enterprises benefit from the high quality of products when the difference between the actual product quality and the perceived product quality of consumers has been eliminated (i.e., the signals that represent product quality have to be recognized from the consumer’s perspective and communicated accordingly). The target customers of MI are cellular phone fanciers who focus on the quality and performance of hardware configuration. MI demonstrates the high-end features of its products by telling the consumers that the CPU and screen of MI phones are the best. Leavitt (1954) argued that price has a positive relationship with perceived product quality (i.e., most consumers perceive the most expensive products as those of better quality than the lower-priced items). However, the low price of MI products did not affect the perceived product quality of consumers because MI had integrated marketing, sales, R&D, and service, thereby achieving high value for money and lowering the cost.

For cost management, MI adopted the philosophy behind the Internet in producing cellular phones and, as a result, triggered a revolution in cost structure that is specifically embodied in R&D. Technological development and market competition have increased the pace at which cellular phones are updated. Consistent with Moore’s law, the performance of microprocessors doubles every 18 months which pressures companies to keep up. However, MI interpreted Moore’s law differently. That is, the unit price of microprocessors decreases every 18 months, and the price of bandwidth and memory decreases even more rapidly. MI likewise adopts the single-mode cellular phones with a long life cycle to handle shipment for cost management. Focusing on the single mode allows MI to devote its resources toward improving the product and saving on cost.

However, the lack of diversity in MI products fails to satisfy the demands of various consumers, different from other companies with a varied selection of products. In this aspect, MI introduces progressive innovation that produces the youth-oriented and enhanced versions to maintain the freshness of its brand. Moreover, MI extends the life cycle of its products to 18 months, which is relatively long compared to the life cycle of other cellular phones lasting only for three to six months, with the exception of Apple and Samsung, and presents a unified platform for different versions.

Most of the components have interoperability that results in scale effect and substantially lowers the price for increased profit. MI uses the Just-in-Time approach to production that involves no inventory (i.e., customers place their order and then purchase, which implies that the cost of inventory is almost zero). For the channel cost, MI has expanded a new channel of Internet marketing that reduces the cost of the intermediate link compared with the traditional channel. At
"Using the creative “futures” approach that entails the mode of forward price, the price is maintained at a steady rate even when profit is negative during the introductory period of products; when the cost decreases according to Moore’s law, MI increases the supply to gain profit."

the same time, MI does not advertise; instead, it uses the public media for marketing for transparency with regard to the public praise of its products, thereby reducing marketing cost while satisfying online customers who achieve a high sense of participation, express willingness to share, enjoy highly personalized consumption, and seek a strong shopping experience. All of these features increase the marketability of the products.

For the sales mode, MI adopts the flash sales approach and limited partial shipment, which creates a sense of scarcity. Liyin Jin (2005) reported that the scarcity of a product can trigger consumer intention to purchase and a positive evaluation of the product. The flash sales mode of MI successfully created a sense of scarcity and increased brand popularity, thereby offering a solid foundation for the later development of MI toward mass marketing.

2.3.2 Software
MI charges a low price for high-quality configuration to attract customers and stay ahead of its competitors. However, this strategy can be easily imitated by other companies and cannot form a unique competitive advantage. The secret for attracting PE investment and making profit is the essence of Internet philosophy and the integration of hardware and the Internet using software. MI sets the large user group of its hardware and software as a basis and makes profits by selling both content and service. This creative business model of MI serves as its core resource that competitors are incapable of copying.

MIUI and Mi Talk constitute the second step of the creative competitive strategy of MI to differentiate itself from other Android companies. MIUI is an Android-based system interface. It is one of the earliest products of MI and forms the core part of the MI triathlon (hardware, software, and operating system) strategy. Going beyond hardware is another factor that has allowed MI to take its current place in the market at a time when all of the other companies are overfilling the hardware parameters and fiercely competing against the prices.

Although the earliest product of MI, Mi Talk, was surpassed by WeChat, MIUI is gradually becoming popular. MIUI thoroughly uses the Internet philosophy and achieves improvement through iteration. MI adopts the principle of “democratizing innovation” proposed by Von Hippel (2005) and has turned the traditionally closed R&D mode of the cellular phone to a totally open one, thereby allowing for decisions that are partially based on user feedback, and hence benefiting engineers. Engineers then make improvements and introduce updates weekly. Ries and Trout (1986) pointed out that a successful position does not imply accurately entering a market segment but forming a fixed image in the minds of customers (e.g., “Afraid of getting inflamed? Drink Wanglaoji!”). The MI slogan, “Just For Fans”, targets cellular phone users. Von Hippel (1986) proposed the concept of lead users, similar to the cellular phone users favored by MI because their need for cellular phones is stronger than that of common users. Füller et al. (2008) asserted that members of a brand community demonstrate significant interest in the brand and its products, and they often have broad product knowledge and willingness to join in the discussion related to the said products. They help each other solve problems and inspire creativity in new products. Thus, they are precious resources of product innovation. Von Hippel (2001) indicated that the creativity of users principally originates from their unmet needs and a higher cost than profit. Therefore, MI has created a user community that lowers the cost of the creativity of users and encourages them to provide feedback on the users’ needs and the problems encountered during their usage.

An estimated 130 million pieces of feedback given by 10 million users helped promote the weekly update of MIUI. The top users of MI likewise help improve the software and have made adaptions to more than 140 cellular phone types and translated the same models into 25 languages. Research has indicated that direct participation in the R&D process of a product promotes user satisfaction. Kelly et al. (1990) argued that the participation of consumers is a novel experience, providing them with a sense of belonging and enhancing their perceived quality of service. Xucheng Fan and Tongyu Zhang (2004) stated that when consumers actively participate in the production process and are no longer bystanders of service output, the deviation of their perception to products decreases and their satisfaction level increases. Silpakit and Fisk (1986) likewise pointed out that the higher the level of participation, the more likely that the consumers will attribute their dissatisfaction with the service output to themselves. The public praise of MI among its users revealed that many engineers are using MIUI when seeking investment and the supply chain, which promotes the negotiation process as well.
Empire” because both the number of MIUI users and the hardware. A “Xiaomi Empire” can thus appear as a “Tencent the collection of money from books and games in addition to has begun using MI-Coin, a monetizing platform that allows number of users and the constantly improving ecosystem, MI application market, game center, books, and cloud services, uniform ecosystem that accompanies a theme store, From the initial small-scale, tool-type system to the present function layer of the system, MI totally bestows the decision-making power on consumers. Thus, when consumers forsake MI and turn to other cellular phone producers, they relinquish numerous opportunities to enjoy customized service. Luce (1998) argued that when consumers give up value-added services, they tend to experience negative feelings. Therefore, consumers will be unwilling to relinquish customized service after enjoying it.

From the initial small-scale, tool-type system to the present uniform ecosystem that accompanies a theme store, application market, game center, books, and cloud services, MIUI is rapidly gaining strength and users. Given a significant number of users and the constantly improving ecosystem, MI has begun using MI-Coin, a monetizing platform that allows the collection of money from books and games in addition to hardware. A “Xiaomi Empire” can thus appear as a “Tencent Empire” because both the number of MIUI users and the amount of monthly sales have surpassed 30 million. The cellular phone industry agrees that the MI application store has the best quality of users and the highest conversion rate, ranking first in the Android group and second only to the Apple App Store.

2.3.3 Participatory Design Concept based on Internet Philosophy

One of the greatest achievements of MI is extending the range of users from fanciers to common consumers, thereby realizing the side-by-side growth of fan communities and its brand. This achievement is rooted in the Internet philosophy of believing in, inspiring, and benefiting MI fans.

Nearly 10 million users can be found in the MI forum. Meanwhile, MI has 3 million weibo fans, 2.8 million wechat fans, most of whom have a strong sense of belonging to MI because it offers different types of products, solicits suggestions for service improvement, and increases public awareness by word-of-mouth. Louis and Lombart (2010) suggested that the brand characteristics perceived by consumers affect their trust, reliance, and promise. Thus, MI wins the trust of MI fans principally because it takes the characteristics of MI fans as its own; when MI fans perceive a similarity with MI, their trust in MI and their reliance on its brand promise increase. The competition between companies has shifted from traditional products and services to user experience. Consumers not only care about the functional value of products, but they also focus on the symbolic and emotional values of the same products. MI has adapted to this type of change and used the Internet in building a brand community to unite MI fans, interact with them closely, and increase their brand loyalty and experience value. MI fans have become the most precious wealth and resource of MI that other competitors are incapable of mimicking. Based on the concept of virtual community proposed by Blanchard and Markus’ (2004), such a community enhances the relationship and quantity of active users. A good relationship and active participation likewise increase not only the sense of identity of users, but also reliance between members and the community, thus forming a positive cycle. Muniz and O’Guinn (2001) pointed out that brand community plays an important role in company development and increases the brand loyalty of consumers. According to McAlexander (2002), a customer-oriented community model is one in which brand, products, consumers, and marketers are all indispensable factors, and where the most important task is to understand the central and interconnected role that consumers play in the model. Jun Lei, Wanqiang Li, and the other co-founders deeply understand this model and are thus present in the online forum for one hour every day. The other engineers are encouraged to use the forum and microblog to establish direct contact with users. Wiertz and de Ruyter (2007) reported that the level of active online interaction of consumers, their promise to the community, and their perceived value of community information are the main driving forces that motivate them to contribute to the
community. Therefore, MI insists on releasing positive and valuable information in its forum to attract both fanciers and users.

MI fans and users have experienced significant changes that reflect rapid growth and serve as the basis for profit, prompting MI to clearly delineate between fanciers and extensive fanciers. In enlarging its fan group and developing the MI culture, MI maintains constant interaction with fans, consistent with the premise of Baggozzi and Dholakia (2006) that community recognition enhances the brand recognition of consumers and affects their purchase behavior. The MI community has evolved from a simple cellular phone platform to a social platform. Moreover, it has designed and released the internal periodical Popcorn, which contains not only information on Xiaomi Technology Co. and its fans, but also MI fans’ stories and photos. MI likewise promotes activities for MI fans located in the same city, such as the “MI Fans Festival” and the “Annual Popcorn Festival”; these activities aim to enhance the interaction between MI and MI fans, promote consumer recognition of MI brand, and encourage purchase.

The Internet has helped expand the group of MI fans and paved the way for the MI discovery of e-commerce. Considering the advantage of the Internet in collecting user behavioral data in real time, MI bases its decisions on the data and succeeds in the cellular phone accessories market. According to Aaker (1997), when products are focused on symbolic value of the brand, the brand will have its own characteristics. Gobe (2001) indicated that a successful brand brings users to a deep and common emotional level. Thus, MI also sells clothes and advertises “a lifestyle of MI” by MI fans. Cellular phone accessories and clothes are different from MI cell phones but also bring in profits that ultimately become additional revenue for MI. The annual revenue of MI cellular phone accessories and related products exceeded one billion RMB in 2013 and accounted for 3.2% of the total revenue of the company.

Using the Internet service, Xiaomi phones and MIUI maintain connections among the personal resources of the MI group (e.g., companies related to Jun Lei, such as Kingsoft, UC Technology, YY, LAKALA, VANCL, and Letao), thereby maintaining the low-cost but highly efficient connections between service, rapid integration, and bi-directional promotion that serve to further strengthen a mobile Internet empire that is difficult to surpass.

2.3.4 Myth of MI
The cultural strategy of MI underlies its attractiveness to PE and its rapid ascent. MI attempted to establish an “MI Myth” similar to the “Apple Myth” advocated by Apple fans. Apple integrated the chase for uniqueness and difference in the American culture using the legendary life of Steve Jobs, thereby creating a religion-like brand myth. Durkheim (1915) asserted that religion could be either a belief or a ritual. In essence, the Apple myth can be regarded as having been established by rituals to a certain extent, such that fans stay up all night to wait for the launch of new products, queue for purchase in a frenzy, and become actively involved in discussions and information-sharing in forums. These actions have far exceeded their real needs and evolved into rituals that can confirm their existence, mutual recognition, and differentiation from people who are not involved. Turner (1995) explained that rituals are an external form of culture and, at the same time, a special and formal conduct by people to express their values, beliefs, and emotions on specific occasions. Van der Hart (1983) stated that rituals could enhance the sense of participation. Vohs et al. conducted further research and concluded that rituals could promote the experience of consumption. The Apple myth developed in this manner. Drawing inspiration from Apple, MI packaged itself according to the desire of Chinese people for equality and a consumption atmosphere characterized by a high sense of participation. The MI team of seven individuals focused on hardware, software, and Internet levels, demonstrated an upstart similar to the one in Silicon Valley, and finally ascended to the image of Chines “Jobs”. In this manner, MI created its brand myth. Shortly thereafter, the company created its unique cultural codes by semiotics.

For instance, the slogan “Focus, perfection, reputation, speed” differs itself from the manufacture-orientation during the industrial age, and the term ”F code” reflects the privilege. It satisfied customer needs through the sense of participation and established a platform for the co-creation of its brand value. Fang et al. (2008) demonstrated that customer participation in the creation of the values of products could promote information sharing and satisfaction with the products and the brand. Similarly, Kinard et al. (2006) indicated that customers with a high level of participation sense relevant benefits when enjoying the customized service. Van Doorn (2010) contended that the co-creation of values could enhance the relationships between customers and companies and the customer asset of companies. MI has successfully promoted its value using cultural strategy, including mythical founders, creating cultural codes, enhancing interaction with customers, and promoting their participation in creating product values.

2.4 Team
With regard to PE investment, entrepreneurial teams are typically required to satisfy the following conditions:

1. The team is stable, and the team members have known each other for several years;
2. They agree on the compensation goals, and an incentive mechanism is in place;
3. The team is complete, experienced, and possesses a strong business capacity in key areas;
4. The industry resources are abundant, and the team demonstrates high awareness and accurate judgment of the industry development trend.
The founding team of MI is completely consistent with these conditions. The average age of the founding members was 40 when they started the MI business. They have grown older but remain close friends who have a common and consistent view of the mobile Internet industry. Their background includes experience with Kingsoft, Google, Microsoft, and Motorola, which are all top international or domestic enterprises, or graduating from first-class design schools. In 2013, the Former Android Global Vice President Hugo Barra joined the MI team and helped it expand to overseas markets. The management team of MI has a broad international perspective and rich industry experience.

Upper Echelons Theory developed by Hambrick and Mason (1984) states that the performance of an enterprise is largely influenced by the biographical characteristics of its top managers. Westphal and Fredrickson (2001) indicated that managers with international experience have a better understanding of complex structures and environments and have a higher efficiency of information processing than the others; thus, they are able to provide accurate predictions in the context of specific strategies.

Srivastava and Lee (2005) asserted that the higher the level of education that the enterprise managers obtain, the earlier they would create a new product and, therefore, the more likely they are to become the market leaders. MI created the MI culture that other Android manufacturers are incapable of imitating, cultivated a large number of MI fanciers, took the lead in the field of smart homes, and became the domestic industry leader. Aside from the leading team, the first 200 to 300 staffers have more than 10 years of industry work experience.

3. SUMMARY

The business philosophy of MI demonstrates an apparent concern for consumers. MI accurately analyzes consumer behavior and characteristics, and it constantly addresses user needs. An innovative “hardware + software + Internet services” business model with rich experience, broad perspective of the leading team, competitive strategy, and a creative marketing model allow MI to stand out in the mobile phone market despite the fierce competition; at the same time, MI has become the apple of PE investment, gradually moving toward the broad intelligent hardware market. MI shows its strong profitability and potential for rapid growth through its impressive performance. The high recognition of the market toward MI affirmed the choice of PE firms, and PE firms can increase its investment in MI. The founding, development, and achievement of MI proved the timeless counsel in business profit: “Look for unmet needs and satisfy them.” The saying echoes the most essential truth in the consumption field—companies should constantly stay close to the consumers.

REFERENCE

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When Professor Leonard Kleinrock sent a message with only two letters “l” and “o” to the Stanford Research Institute’s host computer in 1969, the Internet had come to the world. No one would ever expect, after four decades, the Internet could evolve from a technology to an era, when the invest environment of PE has also changed dramatically. In this time of great change and subversion, the competence of PE institutions is not determined by order of seniority anymore. Only armed with “Internet Thinking” could PE institutions catch the investment opportunity under current circumstances.

Here are the five aspects of "Internet Thinking" for PE firms:

1. PLATFORM AND VALUE
In the Internet era, the platform tends to have the super power of “winner takes all”. PE firms should overcome the mentality of “settling for less”. Because becoming a platform company is the only way for PE firms to build a concrete moat of competitiveness. In the process of building a platform, openness and volume are the two most important key words. That’s what we mean when saying, “the volume of your company is the size of your business”. A new business needs new talents, and only with an open platform and reasonable mechanism can a PE firm attract more new blood. Based on strategies and foresights, making full use of the platform collaboration and extension, PE firms can gain more space for development.

2. SPECIALIZATION AND FOCUS
Focus leads to perfection. By upgrading the level of specialization in the investment and focusing on a particular industry or field, PE firms can provide excellent products, services and user experiences to the LP and the portfolio companies. That’s what they call “Simplicity is beauty. Less is more. Be small and professional rather than large and all-encompassing.” PE firms should learn to give up and to make the money they should be making while increasing the success rate of the investment. Only with the specialization of funds could the specialization of investment be achieved. Specialized funds that focus on specific industries and fields will replace the outdated commingled funds in the future. Furthermore, for specialized funds, team members with more comprehensive skills are required, who should be able to “raise money, find the company, make investment, help with the business, and aid in successful exits.”

3. RESOURCE AND INTEGRATION
This is a cross-boundary era. Those who were not opponents have become opponents, and those who were not peers have become peers now. With the lines between industries blurring, PE firms are required to have greater abilities in integrating resources in multi-industry and cross-disciplinary fields. Furthermore, PE firms should have sustainable innovative spirits. Innovation may "cause death" but conservativeness means "waiting for death". Learn the innovation approach, connect the recourses and find your own way in different circles.

4. BRANDS AND LABELS
There is a popular saying online, “Better be a durian than a banana.” Durians have a unique flavor, and they have many lovers as well as haters. Bananas have a modest flavor that most people accept but not many of them really love bananas. The durians cost over 10 Yuan for half a kilogram while the bananas cost much less at 2 Yuan for half a kilogram for the cheap ones. They have quite different prices. As the PE industry has gone through further specialization, only distinctive firms with “durian characteristics” can stand out in the future. Only when the PE firms create their own DNAs and provide excellent products, services and customer experience to the LP and the portfolio companies, can they have a large group of fans and build a better reputation and brand.

5. SPEED AND PASSION
In the world of martial arts, only the swiftness is invincible. In the era of Internet, the trend of segmentation and refinement in the value train is becoming apparent. The more sudden an investment opportunity comes, the quicker it will go away: for example, the valuation of an Internet project at the early stage in this week could be worlds apart from that in the next week. This requires the PE firms to react fast. Furthermore, the PE industry strongly believes that personal charisma and passion is the biggest motivation for engaging in PE investment. Faced with the LP or the portfolio company, PE firms need to excite themselves before they can excite others, and they need to convince themselves before they can convince others.

In the “Internet Thinking” for PE firms, how do PE institutions excavate the enterprise value? Compared with foreign markets, it is more difficult to make
PE investment in China. “Uncertainty” is the greatest feature of the Chinese market, where much information is incomplete, so it will result in sky-high failure rate if your investment relies only on data.

Based on my thirteen years’ experience of investment, I believe we should focus on the following aspects when investing in China. First, determine the market trends for three to five or even ten years into the future; have a long-term vision when you do it. In China, many industries have an investment window of merely two or three years. If you choose to invest in such industries, you could have a relatively high failure rate. Secondly, a relatively large market space is essential. It would be more difficult for an investor to succeed in a market with a volume of only RMB 2 billion in China. Thirdly, pay attention to the management team of the enterprises that you invested in, which is very difficult to evaluate yet a very important factor in determining the success or failure of an investment. Fourth, since the Chinese market changes rapidly, the GPs should focus on areas of expertise to make a good investment. The Oriental Fortune Capital (OFC) has a policy of "four conditions for no investment": 1. No investment in the expensive; 2. No investment in teams on whom we do not have influence; 3. No investment in those that don’t finish the investment procedure; 4. No hastily made investment in an unfamiliar area.

In the process of assessing an enterprise’s value, there are three aspects that need to be focused on:

1. INDUSTRY SELECTION

PE firms tend to favor industries with the following characteristics. First, the company has a potential of double-digit growth in the next five to ten years and an annual growth rate of about 10% for the whole industry. Secondly, it has a good market perspective, with enough space to host more good companies. Thirdly, it complies with the national policy for industry support, which is essential in China. Without the policy support, it is very difficult for an enterprise to succeed in China. Fourthly, it has a rich pool of management talent.

There are four industries or areas worth investing in China. The first area is internet applications based on mobile intelligent terminals. Though there have been many successful cases, as the mobile technology improves, I believe there are many opportunities in the Internet industry in the future. Secondly, development in the past thirty years has brought China fortune as well as many problems, particularly the environmental issues. Therefore, the environmental technology with the concept of "beautiful China" will have bright prospects. For example, technologies that can lower the PM 2.5 index of Beijing will be welcomed by the PE firms. The third area is the new health industry that focuses on medical service and the “silver-haired industry”. There are not many opportunities left in the medical industry. Based on the improvement of Internet technology, bio-pharmaceuticals, medical instruments and services, especially the last “100-meter race” from registration to finishing seeing a doctor, there will probably be more investment opportunities. Meanwhile, as the post-1960s generation aged, the senior population of China will increase by 450 million, which will bring great opportunities for the aged care industry. Fourthly, China is and will stay as a global manufacturing power, and the equipment manufacturing industry that replaces imports, in particular, still has great opportunities. What’s more, there are relatively sufficient excellent management teams in the four industries and areas mentioned above.

2. MANAGEMENT TEAM

How does a PE firm judge a management team? I believe that entrepreneurship requires two factors: ambition and passion. In China, because of the lack of data and background information, it is very difficult for a PE firm to see through someone. I think any team who has all of the following three characteristics is worth investing. First, the team members are big-hearted and open-minded, especially when the team members have worked together for over three years and all members hold the company’s shares. Secondly, the team members are persistent and consistent. The team has been focusing on only one thing for the past many years. If a company’s founder has too many titles, having his fingers in everything from coal-mining, steelmaking, real estate to high technology, it will be difficult to find out the whereabouts of the money invested in. Thirdly, the team members are face-saving and credible. This means a PE firm should not investment in someone who had wrongdoings because he might go wrong again in the future. In China, it is rare to find someone like Jack Ma (Ma Yun), who has the entrepreneurship as well as the urge to make money. There are a lot of things that can’t be cloned in China. The fact that this man can be successful doesn’t mean another can. Therefore, in China, judging a team is very important for PE investment.

I think the team of Tang Sanzang (or Tangseng) is the best example for a team worthy of investment. First of all, the team has a chairman Tang, who has moderate abilities but commits to the faith of retrieving original Buddhist scriptures from the West, regardless of the 81 challenges and trials on the road. Secondly, Sun Wukong (the Monkey King) in the team possesses great power and holds a share of the company, the magical golden hairband he wears. Thirdly, a Sha Wujing (Friar Sand) is essential to the team too. Sha
is of average capability, but he has great execution ability. Doing everything the Master tells him to, no matter right or wrong. Finally, the team also needs someone like Zhu Bajie (Pig of the Eight Prohibitions) who has capabilities as well as problems, but he puts all of his machinations on the table. This is a team we as a PE firm prefer to invest in. With everyone’s best and worst in the light, this team can travel on a long journey.

I think there are two types of entrepreneurs worth investing in the most. Firstly, the type of entrepreneurs who have ideals, elegance, eloquence, leadership, passion, tears and loyal employees. Jack Ma belongs to this category. He is the one who can make a speech on the Great Wall to his employees when he doesn’t have money and dreams about the future. Secondly, the autocratic entrepreneurs who have goals, ideas, aggressions, responsibilities and dare to make decisions, to yell and to make the employees work for 25 hours a day. Zhou Hongyi is this type of entrepreneur, who is always working hard every time you see him. Both types of entrepreneurs tend to succeed more easily.

3. BUSINESS MODEL
How does a PE firm evaluate the business model? The simplest business model is the best. If you can sell the technology or service to the clients in the fastest and simplest way, you have the best opportunity of success.

How does a PE firm see the technologies? Most of the VC/PE investments are high-tech related. I recall someone in the PE industry once said: “If you do it early, you will fail. If you do it late, you are not likely to succeed, because it will be too expensive”. Therefore, the timing of investment is very important. The total number of patent applications in China accounts for one third of that in the world, but it has a long way to go in independent innovation. A PE firm has two concerns for technologies. One is function improvement, which means the application of the technologies will enhance the function significantly. The other thing is cost reduction, which is equally important. Meanwhile, we should invest in those applicable technologies which don’t have awards of too high a level. For example, the technologies winning a Nobel Prize should not be invested in because they are typically too far away from our market.

China’s private enterprises encounter a lot of problems in the process of growth. And many people say that China’s private enterprises have “original sins”: one is tax evasion and the other is bribery. At the end, we have to exit the companies we invested in through IPOs or other ways, which requires the company to be lawful and compliant in the aspect of legal and financial issues, so the most important thing is to make sure we can solve or eliminate the existing defects or risks of the company by improvement. Specifically, we need to focus on: (1) Equity flaws, that is, the existence of past false capital injection or whether there were unreasonable transactions in stock rights changes. (2) The integrity of the assets, namely whether the assets are owned by the enterprise, and whether there are many connected transactions. (3) Operation risk, e.g. whether the products and technologies are owned by the enterprise, and how high the barriers are for overcoming these technologies. 4. The entrepreneur’s financial flexibility. China’s private enterprises often lack cash, and are excessively financed through banks or even loan sharks. These companies with such great financial pressure often face the fate of failure when the government’s macro-economic control takes place.

On the other hand, when discovering the risks of a company, we should also see the values of the company at the same time: (1) The current value, that is, the enterprise’s profitability. Profitability cannot be merely judged by corporate profits, but should be evaluated together with the cash flow. (2) The future value, namely the company’s future development prospect, the preference of the capital markets and exit prospects such as IPOs, etc.

Pay close attention to details when conducting due diligence in China, because these details often determine whether an investment is a success or a failure. I have summarized the principle of “987654321” of the due diligence investigation.

- Meet more than 90% of the shareholders and management.
- If the company’s daily working hours start at 8 o’clock, then go there and do due diligence at 8.
- Visit at least 7 departments of the enterprise, by going to not only the office of the chairman of the board and the office of the general manager, but also the workshops, R&D, logistics, finance and other departments.
- Stay for at least 6 days in a row in the company; because many private enterprises in China have 6 working days in a week, it is important to see whether the enterprise is really busy or it is cold and cheerless, which suggests that the enterprise has problems in production and operation.
- Make a detailed investigation into the 5 elements of the company, which are the team, management, technology, market, and finance.
- Interview at least 4 clients of the company to understand how customers from upstream and downstream evaluate the company and how it influences the customers.
- Inquire of more than 3 competitors or similar enterprises so as to find out the value of the company in which the fund invested through the evaluation of its competitors.
- Raise at least 20 key questions; the answers for the same question from different persons in the company may be
different, from which we can discover potential problems.

- Have meals at least once with the ordinary employees of the company. The company’s senior managers can make much preparation for the financing but they cannot ask thousands of employees to prepare, so a little chat with the ordinary employees may lead to real feeling about the company. For example, once we were about to leave the company after we looked around and while waiting for the chauffeur we asked a security when he joined the company. The security said he had not gone to the office for a long time before he was told to come here yesterday. It showed that the company came into operation that day just to cope with our investigation, so in the end we did not invest in it.

How to judge the corporate governance and management structure? In China, investments in companies with shareholder discord almost always end in failure. The unity and cooperation between shareholders is very important. The company should have a shareholder who is in the core management and can play a decisive role. In addition, special attention needs to be paid to the cases where both spouses are in the same enterprise, especially when both hold similar amounts of shares. Lots of such incidents happen in China as after becoming rich the husband has an affair and the wife revenges in non-economic ways, which eventually brings down the company.

How to carry out an investigation on equity changes? Ownership structure and its historical transactions are what concerned investors the most. The problem of equity is essentially a problem of the actual controller and we need to know from the investigation whether it is clear and stable who the actual controller is. In China, the existing problem is that the equity distribution is often too spread-out or too scattered, so it is not clear who the actual controller is, or the actual controller owns 100% stake while other key persons have no shares. Investors’ favourite shareholding structure is simple and clear, where there is a core of leadership in the company, and the actual control belongs to major shareholders. In addition, the legitimacy of reform from state-owned enterprises needs special attention too.

Financial auditing in due diligence investigation is very important. I summarize a new accounting equation, which is owners’ equity = assets - management costs – liability. The difference between this equation and the commonly used one is that there is a reduction of management costs in this equation. Most PE investments are minority investments; therefore we can only act as a director or supervisor at most in the company and take no part in its daily operations. In China, we see the annual financial report of listed companies on April 30, quite a long time from December 31 of the previous year, and a lot of things can happen during the time interval. If there is a piece of bad news about the company, the PE firm is often the last to know. At the same time, in Chinese enterprises, people and assets are combined together; sometimes the management is the actual controller and the owner of the enterprise. Hence, it is difficult to replace him/her. Thus in terms of interests, we often fall behind the management and the creditors as well. Therefore, once the investment fails, PE firms will suffer from great losses.

As a result, PE firms should pay attention to some important indicators in financial auditing. For example, we pay more attention to the enterprise’s revenue than profit, because the profit is calculated whereas revenue is validated by a third party. Meanwhile, the ratio of current assets to fixed assets should be reasonable. If fixed assets are too big, the induced depreciation, amortization and financial costs will lower profits, even leading to little profit though with a big sales number.

Besides, don’t believe in miracles when investing. In my ten years of investment experience, big projects that are claimed to “Build another Shenzhen”, for instance, are all failures. Unless there is strong evidence, don’t believe in profitability beyond common sense, astonishing growth, financial indicators far higher than the peer or sudden changes of the trend. Finding another Jack Ma or another Ma Huateng in China is very difficult, and it takes great luck.

What is more, we should pay attention to the company’s cash flow. A lot of enterprises have very tight cash flow, and many are profitable but without the money to pay wages, buy raw materials, or pay tax, which is very deadly.

Last but not least, when doing the financial auditing we should focus on “hard” financial indicators, namely the financial indicators with third-party verification. For example: (1) Payroll. We can evaluate the company’s human resource capability through its payroll and the competitiveness through its average wage level. (2) The utility bill. In China it is easier to evade tax than to steal electricity. If the scale of production and power consumption of an enterprise does not match, it is necessary to find out whether there is a problem. (3) Evaluate the company’s credibility and financial flexibility through bank loans. Whether bank loans are by credit or by mortgage, and whether the interest rate rises or drops, can shed light on the enterprise’s credibility and competitiveness toward banks. (4) Evaluate the industry competitiveness of the company via its payable period for suppliers. Some enterprises have a very long payable period while the cash flow is very bad; some have competitive products, so the payable period is shorter or even to the extent of payment before delivery. (5) Evaluate the profitability of the company by tax. China’s tax rate is relatively high in the world, so many Chinese private enterprises have tax problems. With relatively high profits after paying taxes, the quality of the company must be good.

Put emphasis on on-site experience. Although company investigation is necessarily of a survey nature and does
not go in-depth, we must go to the site to understand the company’s cultural environment, working environment, employees’ mental outlook, etc. We sometimes require a review of the ERP system or accounting data. If companies don’t allow, they may have a problem whereas their defenselessness fully shows the confidence.

In conclusion, PE firms like simple projects with a simple management team, simple business model, simple equity structure and simple investment plan. Foreign PE firms do not understand Chinese investment. Almost 90% of Chinese companies have Ratchet terms and almost 90% have repurchase agreements. In China things have to be so, because the contract spirit in China needs to be enhanced.

How do PE institutions carry out post-investment management and how do they improve the enterprise value?

This is rather difficult. I don’t think most of the RMB funds did a good job in this regard. In the past the maximal value added by PE firms to the company was to help it get listed, but now since IPO has been suspended, this value added is lost.

How to learn from foreign PE/VC funds to help the portfolio company increase its enterprise value in the industry? The most important point is the specialization of GP. The target of further development for the Chinese GP is becoming not only investment experts, but also management experts, or even industry experts. After investment, a PE firm does not get too much involved in the company’s daily operations. Usually we just put more emphasis on such aspects as major appointments or removals, decisions on major issues, major external investment and guarantees. Therefore, only relatively professional and experienced GP can build a platform of value-added services.

For instance, Shenzhen Capital Group organizes tens of activities every year, to gather the managers of the portfolio companies, to contribute to business dealings between upstream and downstream, and to exchange successful experience with each other at the same time. I think this is a very good practice. Moreover, the ability of GP itself is also very important. GP’s focus on an industry for a long time is of great help to the enterprises. OFC selects some experts from the portfolio companies and forms an expert committee. These technical experts are helpful to the companies that we have invested in.

Lastly, I will discuss the value discovery and decision-making models of OFC. First of all, we need to guarantee the quantity. Every month we have about eighty projects to be selected by four industry groups. Secondly, projects need to be selected by experienced teams. We have a project establishment committee. Once a project is found to be worth following up, there will be due diligence for three to six months, and at most two project seminars to determine the initial investment plan. After that there is an initial review for the project. The risk control committee will perform the project pre-selection in order to determine whether it accords with the company’s investment strategy and whether the due diligence procedure has been completely fulfilled. Then it comes to the investment decision-making committee. The committee usually eliminates about half of the projects. All the procedures before the investment committee are streamlined and not meant to judge whether the projects are profitable. Only in the step of the investment committee the values of the projects are assessed. After investing, we enter into the steps of post-investment management and services, and exit through IPOs or other ways.

During the development of Chinese capital market for more than twenty years, IPO has been suspended for eight times, almost a suspension every three and a half years, which is a heavy blow to the PE industry in China. Working in the PE industry for thirteen years, I find the year 2013 the most difficult. Firstly, it was difficult to raise money. 90% of Chinese LPs are private enterprises or individuals; once the IPO is suspended, it is hard for the LPs to give money. Secondly, the LPs themselves face problems such as financial strain as well. Now we hope for the IPO restart as well as the launch of the new third board at the beginning of 2014. At the same time, mergers and acquisitions have become an important way for PE investments to exit. There are nearly three mergers every two days in GEM (Growth Enterprises Market). I think to do investment in the Chinese market one must be familiar with and understand its characteristics so that he/she can find the opportunity, discover the opportunity, seize the opportunity and achieve investment success.

Ten principles to follow when making PE investment in China:
1. Watch CCTV news every day, listen to the Party and follow the Party.
2. Choose the track first, and then choose the player. It is easier to succeed if we invest in familiar fields; choose the industry first and then pick the good companies from that industry.
3. Growth is the core criteria of investment.
4. Put emphasis on technology, and more on the market.
5. Don’t try to change the enterprise but learn how to improve it. Based on my own experience of more than ten years, we failed in most of the companies we had tried to change. No matter how we replaced the CEO, the CFO or the CTO, it did not work. We can only stand on the shoulders of giants to survive, so it is most important to find a good-quality project.
6. Not only should we invest with money, but also with value-added services.
7. It is more important to understand entrepreneur management than understand listing.
8. Investment is essentially made in the people - the management team is the core value of the enterprise.
9. Stay cautious. We would rather miss a project than make a wrong investment.
10. Learn to collaborate and cultivate a habit of joint investment. 60% of OFC’s projects are invested in with other institutions. Joint investment is more beneficial to the enterprise.
Alibaba’s listing on NYSE, an “Open Sesame” for global expansion

JUSTIN HSIAO KUO-WEI, Risk Management Institute, National University of Singapore

Alibaba’s listing on the New York Stock Exchange comes at a time when Chinese internet stocks are enjoying their strongest credit profiles since 2011. The hype of Alibaba’s USD 21.8bn initial public offering (IPO), would value Alibaba as the world’s largest e-commerce portal surpassing online shopping retailer icon, Amazon. The listing of Alibaba would help the Genie of e-commerce spreads its wings into US, Europe, and other emerging markets like India that will add a further icing into its “Singles Day” sales event record of USD 5.78bn. The online retailer has a range of platforms to link business-to-business (B2B), business-to-consumers (B2C) and even has the resources to take on Chinese banks with its Alipay platform i.e. an online payment system like PayPal that could turn into magic for the giant ecommerce player.

The Credit Research Initiative (CRI), a non-profit undertaking by the Risk Management Institute (RMI) at NUS, has been tracking the probability of default (PD) of listed companies since 2009 noticed an improvement in credit profiles of Chinese internet companies that are listed outside China. The PD model covers over 60,000 listed firms in 106 economies in Asia Pacific, North America, Europe, Latin America, the Middle East and Africa. The Aggregate RMI 1-year PD of constituents in CSI Overseas China Internet Index (CSI Index) has been distinctly declining since 2012 and now is in their sub 20 bps (shown in Figure 1). This shows after the slowdown in Chinese economy and internet sector in mid2012- the Chinese online network companies have been enjoying robust growth and thus a better credit profile. The benchmark CSI Index measuring the performance of Chinese internet stocks surged over 2.5-fold from 1610.43 on Sep 30, 2011 to a historical high of 4093.22 on Aug 31, 2014. The CSI Index tracks some 41 Chinese internet companies that are listed outside China (8 in HKG, 1 in NMO, 4 in NMS, 3 in NSM, 13 in NSQ, and 12 in NYSE).

Even before Alibaba’s fundraising foray into US market, a slew of Chinese internet companies has met with success on the NYSE and received equally overwhelming response from investors, for example Chinese online retailer, JD.com. Figure 1 tracks the developments of Chinese internet companies prior to Alibaba filing for IPO on May 06, 2014 since then the Chinese internet sector’s PD has been improving in accordance to an increasing CSI index. The mega IPO in NYSE would value the Hangzhou-based e-commerce as much as USD 167.6bn.

CHINESE INTERNET GIANTS OVERSEAS IPOs
Alibaba is among the top three Chinese internet giants known as BAT- the acronym for Baidu, Alibaba, and Tencent. Baidu, the Chinese Google, was listed on NASDAQ 9 years ago; Tencent, which provides internet, mobile, and telecommunication value-added services in China, famous for its QQ and WeChat got listed on the Hong Kong Exchange in June this year. Table 1 tabulates

<table>
<thead>
<tr>
<th>Rank</th>
<th>Company Name</th>
<th>Offer Date</th>
<th>Exchange</th>
<th>Industry</th>
<th>Deal Size (USD mln)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Alibaba Group Holdings Ltd</td>
<td>Sep 19, 2014</td>
<td>NYSE</td>
<td>Technology</td>
<td>21,766</td>
</tr>
<tr>
<td>2</td>
<td>ABC Bank</td>
<td>July 17, 2014</td>
<td>HK/Shanghai</td>
<td>Financial</td>
<td>19,228</td>
</tr>
<tr>
<td>3</td>
<td>ICBC Bank</td>
<td>Oct 20, 2006</td>
<td>HK/Shanghai</td>
<td>Financial</td>
<td>19,092</td>
</tr>
<tr>
<td>4</td>
<td>NTT Mobile</td>
<td>Oct 22, 1998</td>
<td>Tokyo Stock Exchange</td>
<td>Communication</td>
<td>18,099</td>
</tr>
<tr>
<td>5</td>
<td>Visa</td>
<td>Mar 18, 2008</td>
<td>NYSE</td>
<td>Technology</td>
<td>17,864</td>
</tr>
</tbody>
</table>

Table 1: Largest IPO in history, Source: CNBC
the performance of both companies. They had a recorded a positive share price gains on their first day of trading due to the oversubscription of their IPO interests. The recent peak of the S&P 500 index has also lifted the sentiments of these Chinese internet stocks. S&P 500’s 1 year return rate to date is 18.4%, and the average 1 year return rate of all US-listed Chinese internet companies is somewhat in the range of 51.6%. The backings of Alibaba from major shareholders, Yahoo and Softbank, would draw more interest from investors than other internet counters given the global image from these 2 major internet players. Likewise, Alibaba– the Genie of Chinese internet companies may follow suit of its 2 compatriots, Baidu and Tencent to enjoy substantial growth in market capitalization. Both Baidu and Tencent recorded triple-digit growth in their market capitalization, i.e. Baidu has a 141.07% growth in market capitalization from 2005 to 2014, and in the past 10 years, Tencent’s market cap has increased 166.41%.

"Both aggregate RMI 1-year PDs for US-listed Chinese IT service and e-commerce firms have improved since three years ago."

<table>
<thead>
<tr>
<th>Issue Name</th>
<th>Trading Stock Exchange</th>
<th>Offer Size (USD mn)</th>
<th>Offer Price (USD)</th>
<th>Change in Market cap from IPO to date (%)</th>
<th>1st trading day price premium over offer (%)</th>
<th>Trade Date (US)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baidu Inc</td>
<td>NASDAQ</td>
<td>109</td>
<td>27</td>
<td>141.07</td>
<td>144.44</td>
<td>Aug 04, 2005</td>
</tr>
<tr>
<td>Alibaba Group Holdings Ltd</td>
<td>NYSE</td>
<td>21,766</td>
<td>68</td>
<td>--</td>
<td>--</td>
<td>Aug 18, 2014</td>
</tr>
<tr>
<td>Tencent Holdings Ltd</td>
<td>HKSE</td>
<td>202</td>
<td>0.48</td>
<td>166.41</td>
<td>18.24</td>
<td>Jun 15, 2004</td>
</tr>
</tbody>
</table>

Table 2: Chinese internet giants IPO data, Source: Bloomberg

Figure 2: Aggregate RMI 1-year PD of main 5 IT service US-listed firms (LHS) and Aggregate RMI 1-year PD of main 5 e-commerce US-listed firms (RHS).

In terms of Market Cap, main 5 IT service companies are Baidu Inc, NetEase Inc, Qihoo 360 Technology Co Ltd, YY Inc, and SouFun Holdings Ltd. In terms of Market Cap, main 5 E-commerce companies are Vipshop Holdings Ltd, Trip.com International Ltd, E-Commerce China Dangdang Inc, eLong Inc, and Mecox Lane Ltd. Source: Risk Management Institute

FINANCIAL PERFORMANCE OF US-LISTED INTERNET FIRMS

As shown in the table 2, even though the financial report cards of US-listed internet companies have slightly deteriorated in terms of profitability and liquidity since the 4th quarter of 2013, but it still stayed positive and stable sector-wise. Alibaba, which went public in Sep 2014, delivered much stronger profitability than peers. In the 2nd quarter of 2014, the operating margin and net income margin were 49% and 45% respectively, higher than 5% and 10% of the sector median. With regard to liquidity, both current ratio and cash ratio for Alibaba improved from the 4th quarter of 2013 to the 2nd quarter of 2014. Despite the fact that its total debt to equity ratio was higher than the sector-wise number, it makes good sense for Alibaba to possess a higher leverage as than those listed internet companies.
SHAREHOLDER STRUCTURE

Unlike other listed companies, the shareholding structure of Alibaba shares a similarity with Silicon Valley media and internet companies. In general, each ordinary share is entitled to one vote, the internet portal has a unique shareholder structure called Alibaba Partnership, which is composed of management and related companies. The Partnership, according to the prospectus, has the exclusive right to nominate a simple majority of board of directors. In addition to the exclusive nominating right, there is a voting agreement between Alibaba and its 2 affiliated companies, Softbank Corp. and Yahoo Inc., which is another unfavorable game clause for investors outside the Alibaba Partnership. Under the agreement, Softbank Corp. (with 29% shares holding) and Yahoo Inc. (with 15% shares holding), the largest and second largest shareholder of Alibaba respectively, will always vote in favor of the election of the Alibaba Partnership’s director. The partnership structure and the voting agreement both allow the top management to have full control of the company even though the management, including Jack Ma (the executive chairman) and Joseph Tsai (the executive vice-chairman), merely owned 12% of total issued shares. In brief, it favors a system when shareholders are prevented from speaking and let the management decide the direction of the company. Therefore, public investors, would de-facto be the minority shareholders and thus, have to worry about subscribing in the IPO due to having no voting rights.

Major shareholders are divesting their holdings after the IPO. Table 3 shows, after the IPO, the shares held by major shareholders would decrease to 59% from 73%, while the ones of minor shareholders would increase to 41% from 27%. To take a closer look at the change in each shareholders’ holding between pre-IPO and post-IPO, we find that the overall major shareholders’ holding decrease could also be attributed to the dilution effect with the issue of new shares. Yahoo Inc., which is divesting its stake in Alibaba stands to reap a substantial amount from the IPO and likely to plough back the proceeds into its own core business.

However, a point to note the direction of Alibaba’s growth path remains in the hands of a few individuals as the reduction of the stakes of major shareholders will not affect the voting system and thus the only thing outside investors could do when they are not satisfied with the management’s business decision is sell their shares.

GREAT EXPECTATION OF E-COMMERCE

According to National Bureau of Statistics China, the population of the 2nd biggest economy in the world reached 1.35bn people at the end of 2013, which is 4 times compared to 316bn United States’ population. However, the Chinese spending power still lags behind US. The number of internet users in China stood at 623 mn in 2013, which translates to an internet penetration rate was only 46%. On the other hand, US’s amount of internet users was 266mn - an 84% internet penetration rate. As for smart phone penetration rate, US was 64.2%, and China was 28.3%. In 2013, US total e-commerce sales was USD 359 bn, accounted for around 30% of global e-commerce sales. China only had USD 31.6 bn in 2012 according to Bloomberg database. However, in 2013, China’s total e-commerce gross merchandise volume (GMV) was USD 1,947.5bn, which means the online shopping activities were hearty.

Table 3: Financial performance metrics for Alibaba Group and Chinese internet companies Source: Bloomberg

<table>
<thead>
<tr>
<th>Period</th>
<th>Operating Margin</th>
<th>Net Income Margin</th>
<th>Current Ratio</th>
<th>Cash Ratio</th>
<th>Total Debt to Equity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q4 2013</td>
<td>52%</td>
<td>48%</td>
<td>1.80</td>
<td>1.24</td>
<td>27%</td>
</tr>
<tr>
<td>Q1 2014</td>
<td>51%</td>
<td>41%</td>
<td>1.81</td>
<td>1.21</td>
<td>100%</td>
</tr>
<tr>
<td>Q2 2014</td>
<td>49%</td>
<td>45%</td>
<td>1.94</td>
<td>1.32</td>
<td>100%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Period</th>
<th>Operating Margin</th>
<th>Net Income Margin</th>
<th>Current Ratio</th>
<th>Cash Ratio</th>
<th>Total Debt to Equity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alibaba</td>
<td>10%</td>
<td>16%</td>
<td>2.98</td>
<td>1.72</td>
<td>33%</td>
</tr>
<tr>
<td>Sector Median</td>
<td>4%</td>
<td>4%</td>
<td>2.74</td>
<td>1.59</td>
<td>49%</td>
</tr>
</tbody>
</table>

Table 4: Shareholder structure of Alibaba before and after IPO Source: Bloomberg

<table>
<thead>
<tr>
<th>Pre-IPO</th>
<th>Post-IPO</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of shares (mn of shares)</td>
<td>No. of shares (%)</td>
</tr>
<tr>
<td><strong>Total outstanding shares</strong></td>
<td>2,381.0</td>
</tr>
<tr>
<td><strong>Major shareholders</strong></td>
<td>1,748.0</td>
</tr>
<tr>
<td>Jack Ma</td>
<td>206.1</td>
</tr>
<tr>
<td>Joseph Tsai</td>
<td>83.5</td>
</tr>
<tr>
<td>Other Directors &amp; Executives</td>
<td>52.3</td>
</tr>
<tr>
<td>Softbank Corp</td>
<td>797.7</td>
</tr>
<tr>
<td>Yahoo Inc</td>
<td>523.6</td>
</tr>
<tr>
<td>Silver Lake Management LLC</td>
<td>58.9</td>
</tr>
<tr>
<td>CITIC Capital Holdings Ltd</td>
<td>22.8</td>
</tr>
<tr>
<td><strong>Minor shareholders</strong></td>
<td>536.0</td>
</tr>
</tbody>
</table>
Apparently, the room for improvement for e-tailing in China is huge considering the 120% compound annual growth in e-commerce industry since 2013, its gigantic population base, and low internet & mobile device penetration ratio. Moreover, unlike in the US, the non-tier 1 & 2 cities in China have not been penetrated by organized retailers or consumer brands yet. This offers another opportunity for e-commerce to become the mainstream business model for these cities.

Figure 3 displays China’s e-commerce revenue breakdown from 2009 to 2012. Within 4 years, the total revenue had grown more than 8 folds. The growth of B2C branch was most manifest, from USD 2.4 bn to USD 24.6 bn, and pushed total e-commerce revenue to USD 30.1 bn in 2012. Alibaba is a behemoth in this booming market. Figure 2 right side axis shows the market share of Alibaba in different business types. Even though its market share of B2B had dropped to 40.7%, it still outgunned the second player’s 8.7%. Most importantly, Alibaba is gaining power in B2C market, the sector that generates most revenue. According to Bloomberg data, Tmall accounted for 57.7% of B2C market share in 2013.

Alibaba showed its ambitions to expand the business into US and Europe markets along with IPO roadshows, selling Chinese products to westerners on its internet platforms. This can be a warning bell for the online retailer icons like Amazon and eBay considering how large Alibaba’s market value is. However, the ambitious tactic of Chinese e-tailing emperor can be questionable. In the mature markets like US and Europe, the growth rates are slower and shopping habits are fixated. Furthermore, the Alibaba’s magical formula in China is offering intermediate portals to online transactions for growing middle classes in big cities and rural places and may not work in developed countries. But, brick-and-mortar shops are easily accessed to the public in developed countries, which limits the growing potential of e-commerce. Many observers still think the leading positions of Amazon and eBay will be sustained in the developed economies as they got a better supply chain than Alibaba. Without any major acquisition, Alibaba may not stand out from the crowd in US and Europe.

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China’s Economy Is at the Crossroads

After dazzling the world with a staggering pace of growth over the last three decades, China now find itself at an economic crossroads. The economy saw moderating growth rate, burdened by industrial overcapacity, piles of local government debt and eroding competitiveness. Fixed asset investment and low value added exports have helped drive China’s rapid development. However, this growth model is unsustainable. Rapid wage inflation in China is eroding cost advantages, while external demand remains uncertain given the deleveraging needs of developed economies. Further reliance on fixed asset investment also creates the risk of a bubble economy with inefficient capital allocation. Structural reforms are underway. China needs to create sustainable development by boosting domestic consumption, services, and higher value added industries. Policymakers are steering China towards higher quality GDP growth.

Looking for Market-Oriented Solutions

The Third Plenary Session (the Third Plenum) of the 18th Central Committee of the Communist Party of China unveiled the government’s future policy direction on major reform topics. During the Third Plenum, the government pledged to allow market forces to play a “decisive” role in allocating resources and to create more room for private enterprise by opening up more industries to private capital. This indicates that the government is giving greater emphasis to the market-driven forces, unleashing new vitality into China’s long-term economic growth by boosting efficiency and transitioning to a more sustainable development model. It would manifest itself in a wide range of economic reforms, including those in the financial sector, real estate, public governance, etc., paving the way for broad positive changes to the world’s second largest economy.

Private Equity Comes into Play

Private equity has emerged as an important market force to drive the reform. Since the first venture capital established in China under the approval of the State Council in 1985, the private equity industry saw rapid development. It expanded at a remarkably fast pace, riding on the country’s structural changes and the mature of capital markets. Private equity funds have been investing in the transformation for years, plowing funds into a wide array of services and high-tech industries, such as retail, health care, biotechnology, information technology, etc. Today, there are around 6,500 funds in the country, managing about RMB2tn of funds. In 2012, total funds raised reached RMB219bn. Deal volume stood at RMB103bn, over five times of 2009’s level. Private equity is also a key source of direct financing. Its share of total social financing was only 0.14% in 2009, while increased to 1.09% in 2012.

Enabling SMEs to Grow

Private equity is becoming a major source of funding for SMEs, offering the capacity to blossom into bigger companies. SMEs are expected to play a crucial role in the structural reform, as they are more innovative and nimble to change. According to a government think tank, over 65% of China’s new patents, 75% of new technology developments, and 80% of new product launches are from SMEs. Policymakers are also banking on SMEs for job creation in the coming decade as China’s urbanization trend continues. However, many small business owners often lack the resources and expertise needed to take their companies to the next level. In China, SMEs generated around 60% of GDP but only took up around 30% of bank loans. Private equity and venture capital usually seek high investment returns with greater risk appetite. This matches well with SMEs’ profile, risky but high growth potential. Private equity funds provide funding to SMEs to maximize their profits. Meanwhile, they also bring operational know-how and financial expertise to strengthen SMEs’ business management.
CONTRIBUTING TO THE ECONOMIC UPGRADE
Innovation and entrepreneurship within the private sector will be paramount in China’s economic upgrade. Private equity scales up innovation by channeling capital to great ideas. It is an important engine of new business creation and a major force in commercializing scientific results. The U.S. economy owes much of its postwar growth to emerging, hi-tech enterprises, which contributed significantly to employment and technology upgrade. Venture capital and private equity played a vital role in helping these fledging enterprises to grow. A number of famous U.S. companies, such as Microsoft, Apple, Google, started as venture capital-backed startups and turned into world-leading companies. Chinese government also attaches great importance to support emerging industries of strategic importance in China. It plays a proactive role through government-guided venture capital funds. 89 government-guided venture capital funds have been established as of July 2012, raising RMB466bn of funds in total. These funds mainly invested in the high-tech enterprises to drive innovation and economic upgrade.

FUEL “GOING GLOBAL” DRIVE
In recent years, China’s government has rapidly ramped up its policy of encouraging domestic companies to “go global”, especially through international mergers and acquisitions. China’s outbound direct investment (ODI) reached a total of $90bn in 2013. That is 30 times of the $3bn that Chinese companies invested overseas ten years ago. The volume of ODI is obviously increasing, but it is worth noting that Chinese companies’ overseas acquisitions have one of the world’s highest failure rates, partly due to lack of experience. PE firms come into play acting as co-investors. From the beginning evaluating the business strategy and helping structuring financing, to post-investment management, PE firms play a big part in ensuring the success of the acquisition. Companies are becoming more familiar with the benefits that partnering with PE firms can bring and increasingly getting PE involved in overseas deals.

NEED FOR A MORE COMPREHENSIVE REGULATORY FRAMEWORK
Amidst the booming opportunities in China, challenges do exist for the private equity industry. For one, the regulatory framework needs to be enhanced to bring greater stability and certainty to the industry. It has not been long since the China Securities Regulatory Commission (CSRC) took full responsibility in overseeing the administration of domestic private equity and venture capital funds. It takes time for the regulator to establish a more comprehensive regulatory and legal framework. In January 2013, the CSRC confirmed that the Asset Management Association of China would be in charge of administering the registration of private investment fund managers, the filing of private funds and the self-regulation of the industry. With the release of the Measures on Private Investment Fund Manager Registration and Fund Filing (Trial Implementation) by the Asset Association marked the official launch of the registration and filing of private funds. Meanwhile, the CSRC is in the process of drafting administrative regulations on private funds and is planning to establish a coordination mechanism with the National Development and Reform Commission (NDRC) to ensure the sustainable and sound development of private equity funds.

MULTI-LEVEL CAPITAL MARKET IS UNDER DEVELOPMENT
The lack of a wide variety of exit channels reduces the level of private equity fundraising and investment activity. Meanwhile, the ad-hoc suspension of IPOs, like the one started since October 2012, may negatively impact private equity funds’ liquidity and performance. The multi-level capital market is still under development in China. In 2013, the National Equities Exchange and Quotations (the new Third Board), a national-level over-the-counter market for SMEs, was launched after years of trial. As of Feb 2014, there are 667 companies listed on the new Third Board, more than triple the number at the end of 2012. In Shenzhen, the Qianhai Equity Exchange was established with 1,200 firms making their debut. These developments indicate a solid step forward in the road to a multi-level capital market, providing private equity funds with an increasingly wider variety of exit channels.

POLICY RECOMMENDATIONS
First and foremost, more unified and comprehensive regulations need to be put in place. Second, taxation environment needs to be improved for PE funds. Issues need to be resolved including the double taxation on corporate type fund, the lack of tax rules on contractual type REITs, etc. Third, more supportive policies to encourage the development of PE/VC need to be formulated at national level. For example, the authorities should further streamline the filing and registration process of PE funds. Last but not the least, there are still limited sources of long-term money such as pension funds in China, which are vital for the healthy growth of PE industry in the long run.

A PROMISING OUTLOOK
The growth potential remains vast for the private equity industry in China, as it is still in its infancy. Although Chinese private equity is becoming increasingly sophisticated, they are not as professionally managed as leading global PE funds. In US, there are a variety of private equity funds with different investment philosophies and strategies, such as leveraged buyouts, growth capital, distressed investments and mezzanine capital. Specialization is becoming necessary to give PE firms a competitive edge. In China, private equity funds are much less matured and have yet reached their full potential. Meanwhile, more and more foreign private equity firms enter into China’s market, competing fiercely with local players. They also bring with expertise and global practice to the market. This acts as an important force, propelling the industry to mature. In turn, the booming private equity industry will benefit China’s economy, making a significant and growing market force for the structural reforms in coming decades.
IntroductIon

Many people believe that a cause of the recent financial crisis is the limited liability of fund managers, which means profits are shared but not losses. This has serious consequence in terms of risk taking. For example, suppose one has a trading strategy that leads to 20 percent gains 99 percent of the time. Then it is not clear at all whether a rational individual should use the strategy, as those 1 percent cases may lead to huge losses. However, it may be optimal for fund managers and corporations to pursue such a strategy, due to the limited liability protection. Since the limited liability protection is a fundamental principle of firm structure, there is no way to eliminate it.

But one can have still some checks and balances. For example, the fund managers can set up a deposit, such as 10 percent of fund capital, by using the manager’s own money, and, if there is a loss, the deposit money will be used first to offset the losses; in return the fund manager can ask for higher profit sharing such as 40%, versus the current hedge fund standard of 20%. The above compensation scheme is called the first-loss scheme. It has been quite popular in China for privately held funds (which are similar to hedge funds in the U.S.), and is emerging in the U.S. according to a CBS Marketwatch report on May 23, 2011.

One natural question is which scheme is better, the traditional scheme or the first-loss scheme? Is there a way to even improve these schemes?

In He and Kou (2014), we analyze both the first loss scheme and the traditional scheme, in which the fund managers invest 10% regular capital and get 20% profit sharing. By using the s-shaped utility function from behavioral finance, we find that if a new scheme, namely the 10-30 first-loss scheme (i.e. 10% as the first loss capital in return for profit sharing at 30%) is used, then both fund managers and investors will be better off than under the traditional scheme, as measured by their utility functions.

Furthermore, the risk of the hedge fund strategy is lower in the 10-30 first-loss scheme. The current article attempts to give a summary of He and Kou (2014) in a less technical way.

BACKGROUND AND LITERATURE REVIEW

There are at least two reasons why there is little literature on studying profit sharing in hedge funds: (1) Within the traditional utility framework the profit sharing will depend on the initial wealth levels of both investors and fund managers, thus making it hard to give a consistent recommendation for different investors and fund managers with different initial wealth amounts. (2) The proprietary nature of the hedge funds leads to the scarce of the data for estimating model parameters. For example, hedge funds report their fund performances at most every quarter, the holdings of their portfolio to large extend remain secret and also change from time to time, and there is no option contract on hedge funds. Thus, due to the scarcity of the hedge fund data, we cannot use daily return data or daily option data to estimate parameters for hedge funds.

We attempt to provide an analytical framework of studying profit sharing between fund managers and fund investors. The framework consists of two parts: (1) Using cumulative prospect theory (Tversky and Kahneman, 1992) to compare different profit sharing schemes analytically. (2) Using the historical attrition rates of U.S. hedge funds, which are between 10% to 20%, to calibrate utility parameters in the model. As an application, we compare the traditional scheme and the first-loss scheme. The ranges of the calibrated parameters are good enough for us to find that in most cases switching from the traditional scheme to the first-loss scheme can improve the well-being of both managers and investors simultaneously, if the incentive rate is chosen to be 30%. Our numerical result also suggests that investors will be worse off if switching from the traditional scheme to the current first-loss scheme with 40% incentive rate.

There are three reasons why cumulative prospect theory (CPT) is useful in our framework:

(1) CPT is descriptively better than expected utility theory and has been applied in many aspects of finance; see, e.g., Barberis and Thaler (2003). Furthermore, it fits the setting of hedge fund performance fees naturally. For example, both the fund managers and investors have natural evaluation periods and reference points. (2) The
use of CPT leads to analytical tractability. With S-shaped utility functions, we obtain the optimal trading strategies in closed-form. Moreover, we find that the optimal strategies depend only on the loss-gain ratio that measures the ratio of loss impediment and gain incentive for the manager, regardless of the schemes being used. In addition, we show that within our setting one can compare the risk (e.g., using either volatility or value-at-risk) in the two schemes easily by comparing the loss-gain ratios. Finally, we also obtain closed-form formulae for the utilities of both fund managers and investors when the fund managers use the optimal strategies. These explicit formulae are needed to compare profit sharing under the traditional and first-loss schemes.

(3) The model implication by using CPT seems to fit data better than by using the traditional expected utility theory. Within the framework of expected utility theory, Carpenter (2000) shows that the risk of a hedge fund is decreasing with respect to the performance fee of the manager when the manager’s preference is modeled by a power utility function, while Kouwenberg and Ziemba (2007) show that the opposite is true if the manager’s preference is modeled by CPT. The empirical study in Kouwenberg and Ziemba (2007) supports the latter conclusion.

In most of the analysis, we do not consider probability weighting, an important component in CPT, for three reasons: First, it is known that time inconsistency, an issue of individuals’ optimal dynamic decision rules obtained today being no longer optimal when revisited in the future, arises in a dynamic decision problem with probability weighting: see for instance Barberis (2012). To avoid this issue and the resulting complication, we decide not to consider probability weighting in most of the analysis. Secondly, the analysis of our hedge fund problem with probability weighting, although possible, needs sophisticated analytical tools. Thirdly, introducing probability weighting results in more model parameters, which makes the calibration of the parameters more difficult given the scarcity of the hedge fund data. To complete our analysis, however, we can extend our model to incorporate probability weighting; indeed, we show that when the manager considers the so-called pre-commitment strategies, i.e., when the manager considers strategies that are optimal at the initial time without revisiting and changing them in the future, most of the results obtained in the case of no probability weighting still hold.

The only other paper using CPT in hedge fund managerial compensation design is Kouwenberg and Ziemba (2007). Compared to our paper, they focus on the risk of the fund, rather than profit sharing. In particular, they did not compute managers’ and investors’ utility explicitly, did not investigate the first-loss scheme, and did not consider probability weighting.

On the other hand, the studies of hedge fund risk taking in the classical expected utility (EU) framework are extensive. For instance, Bichuch and Sturm (2013) consider hedge fund investment in a general setting for a risk-averse manager with EU preferences and compensated by the traditional scheme. Guasoni and Obloj (2013) find the optimal trading strategy of a risk-averse manager with a power utility function under the traditional scheme with high-water mark provisions. However, these papers do not consider profit sharing which is the main focus of our work.

Our study of profit sharing in hedge funds takes a different approach from the classical risk sharing literature. In risk sharing, agents’ preferences are assumed to be known and then optimal risk sharing is to be found among a feasible set of risk sharing contracts. Therefore, the optimal risk sharing depends on the agents’ preferences and on other model parameters which are difficult to estimate. In our problem, we compare two profit sharing schemes in hedge funds and show that the first-loss scheme (with a suitable incentive rate) is better than the traditional scheme across a wide range of model parameters. Therefore, our approach bypasses the difficulty of estimating model parameters. Furthermore, given the model parameters, we are also able to find the optimal first-loss scheme, i.e., the optimal incentive rate, from the investors’ and managers’ perspectives, respectively.

THE MODEL

We assume that the fund manager invests in two assets: a risk-free asset and a risky asset, whose price dynamics are given, respectively, by

\[ S_f(t) = e^{r t}, \quad t \geq 0, \quad dS_r(t) = \mu S_r(t)dt + \sigma S_r(t)dB(t), \quad t \geq 0. \]

Here, \( r > 0 \) is the risk-free rate, \( \mu > r \) is the appreciation rate, \( \sigma > 0 \) is the volatility, and \( B(t) \) is a one-dimensional standard Brownian motion. Let \( \kappa := \sigma^{-1}(\mu - r) \) be the market price of risk of the risky asset. The geometric Brownian motion model is standard in the literature. If the manager invests \( \pi(t) \) dollars in the risky asset at time \( t \), then the asset value of the fund, \( X(t), \quad t \geq 0 \), evolves according to

\[ dX(t) = rX(t)dt + \pi(t) [(\mu - r)dt + \sigma dB(t)]. \]

There is a lower boundary \( B(t), 0 \leq t \leq T \), constraint on the investment strategy, i.e.,

\[ X(t) \geq B(t) := be^{-(r-\kappa)T}X(0), \quad 0 \leq t \leq T, \]

for some \( b \in [0, 1) \). This lower boundary, which is known as liquidation boundary of the fund, exists in practice and has also often been included in previous models.

In the traditional scheme, let \( \alpha \) be the managerial ownership ratio, i.e., the proportion of the fund that belongs to the manager, and \( \beta \) be the incentive rate. Then, at the terminal date \( T \), if the fund makes a profit, the manager charges...
a performance fee that is \( \alpha \) proportion of the external investors’ profit. Therefore, under the traditional scheme at time \( T \) the manager’s net profit-or-loss is

\[
\theta(X(T)) \begin{cases} 
(\omega + \alpha (1 - \omega)) (X(T) - X(0)), & X(T) \geq X(0), \\
\omega (X(T) - X(0)), & X(T) < X(0).
\end{cases}
\]

In the first-loss scheme, the fund manager’s own capital invested in the fund will be used to offset any losses before any external investors take a loss. Thus, with the managerial ownership ratio (for the first-loss capital) being \( \tilde{\omega} \) and the incentive rate being \( \alpha \), under the first-loss scheme at time \( T \) the manager’s net profit-or-loss is

\[
\tilde{\theta}(X(T)) \begin{cases} 
(\tilde{\omega} + \alpha (1 - \tilde{\omega}) (X(T) - X(0)), & X(T) \geq X(0), \\
\tilde{\omega} (X(T) - X(0)), & X(T) < X(0).
\end{cases}
\]

Note that this payoff function is not convex.

CPT suggests that individuals tend to be risk averse with respect to random gains of moderate probability and risk seeking with respect to random losses of moderate probability; moreover, individuals are averse to losses. Formally, we assume that the manager in our hedge fund model evaluates random gains and losses \( Y \), where gains are recorded as \( Y \geq 0 \) and losses are recorded as \( Y \leq 0 \), by \( E[u(Y)] \) for some S-shaped utility function \( u(\cdot) \). We use the following functional form of \( u(\cdot) \), which was also used by Tversky and Kahneman (1992):

\[
u(x) = x^p, x \geq 0, \quad u(x) = -\lambda(-x)^p, x \leq 0,
\]

where \( 0 < p < 1 \) is called the diminishing sensitivity parameter which measures the degree of risk aversion and risk seeking with respect to random gains and losses, respectively, of moderate probability. The parameter \( \lambda > 1 \) is called loss aversion degree.

In our problem, the fund manager naturally chooses \( T \), the performance fee payment date, as her evaluation period and chooses \( X(0) \), the initial asset value, as her reference point. Then, the manager evaluates her gains and losses following CPT, in which two critical parameters (the diminishing sensitivity parameter \( p \) and loss aversion degree \( \lambda \)) are involved. As a result, under the traditional scheme the fund manager solves the following optimization problem:

\[
\max_u E[u(\theta(X(T)))],
\]

subject to \( dX(t) = rX(t)dt + \sigma(t) \left( [\mu - r]dt + \sigma dW(t) \right), \)

\[
X(t) \geq be^{-(T-t)}X(0), \quad 0 \leq t \leq T. \quad \text{Under the first-loss scheme the fund manager solves another optimization problem}
\]

\[
\max_u E \left[ u(\tilde{\theta}(X(T))) \right],
\]

subject to \( dX(t) = rX(t)dt + \pi(t) \left( [\mu - r]dt + \sigma dW(t) \right), \)

\[
X(t) \geq be^{-(T-t)}X(0), \quad 0 \leq t \leq T. \quad \text{Under the first-loss scheme the fund manager solves another optimization problem}
\]

\[
\max_u E \left[ u(\tilde{\theta}(X(T))) \right],
\]

subject to \( dX(t) = rX(t)dt + \pi(t) \left( [\mu - r]dt + \sigma dW(t) \right), \)

\[
X(t) \geq be^{-(T-t)}X(0), \quad 0 \leq t \leq T. \quad \text{Hereafter we assume} \quad \tilde{\omega} \leq 1 - b, \quad \text{so that in the worst case the investor in the first-loss scheme may still suffer losses after the coverage by the manager.}
\]

We again argue that because the initial asset value of the fund is a salient component in the incentive schemes determining the manager’s compensation, the investor would naturally choose this value to be her benchmark to distinguish gains and losses. Therefore, we use CPT as well to model the investor’s preference. For simplicity, we assume the utility function to be

\[
u(x) = x^q, x \geq 0, \quad v(x) = -\eta(-x)^q, x \leq 0,
\]

where \( q \in (0, 1) \) and \( \eta > 1 \).

**MAIN THEORETICAL RESULTS**

There are several analytical results. First, for the fund manager, the optimal trading strategy under the model can be found analytically, and the optimal strategy is quite different from the traditional Merton’s strategy for power type utility function when the payoff is just \( X(T) \).

Secondly, define the loss-gain ratio for the manager under the traditional scheme

\[
\gamma := \frac{(1 - b)\omega}{\omega + \alpha (1 - \omega)}.
\]

and under the first loss scheme

\[
\gamma^* := \frac{\tilde{\omega}}{\tilde{\omega} + \alpha (1 - \tilde{\omega})}.
\]

In both schemes, both the risk of the fund and the asset volatility are strictly decreasing in the loss-gain ratio, i.e. \( \gamma \) and \( \gamma^* \) for the manager. Consequently, the risk of the fund (or equivalently the asset volatility) in the first-loss scheme is same as (strictly higher than or strictly lower than) in the traditional scheme if and only if \( \gamma^* = (\leq or \geq) \gamma \).

For example, suppose \( b = 50\% \), which means that the fund can only lose 50% of its initial asset in the worst case. In a typical first-loss scheme newly introduced in the U.S., the managerial ownership ratio is 10% and the incentive rate is 40%. Let us compare it with a traditional scheme with the same managerial ownership ratio but a 20% incentive rate, a typical number in the U.S. It is easy to calculate that \( \gamma = 17.86\% \) and \( \gamma^* = 21.74\% \). As a result, the risk in the first-loss scheme is lower.

Thirdly, no matter which scheme is used, the utility per capital of the manager is strictly decreasing in the loss-gain ratio. Consequently, it is strictly increasing in the incentive
rate and strictly decreasing in the managerial ownership ratio. In particular, if you make the risk the same in the two schemes by manipulating some contractual components in the two schemes, e.g., the incentive rate, then the utility of the manager can be strictly increased.

This observation implies that it is possible to design a first-loss scheme so that it is better than the existing traditional scheme from the perspectives of risk taking and managers’ utility at the same time!

Finally, the utility per capital of the investor can also be computed analytically in both schemes.

**CALIBRATION RESULTS**

We use our profit sharing model and hedge fund data to calibrate CPT. One advantage of this approach is that the managers naturally choose the performance fee payment date as the evaluation period and benchmark for the performance fee as the reference point to distinguish gains and losses. The main disadvantage is that there is little data available, as hedge funds report their fund performance at most every quarter (not daily) and the holdings of their portfolio to large extend remain secret and also change from time to time. Facing this data challenge, we shall use the historical hedge fund attrition rates to do the calibration. A substantial percentage of hedge funds disappear from the hedge fund databases each year, mainly due to liquidation. The historically observed attrition rate can be regarded as the hedge fund liquidation probability.

In our model, the attrition rate can be computed analytically. With only one number attrition rate, it is impossible to calibrate two parameters $\lambda$ and $p$. The previous experimental results suggest that it is more difficult to estimate $p$ than $\lambda$, and in most cases $\lambda$ lies in the range $[1.25, 3.25]$. Therefore, we choose to fix $\lambda$ at five different values: $1.25, 1.75, 2.25, 2.75,$ and $3.25$ and calibrate the diminishing sensitivity parameter $p$ to the attrition rate of U.S. hedge funds, which is well within the range of 10% to 20%.

Next, we apply the framework to investigate whether (1) the first-loss scheme with 10% managerial ownership ratio and a carefully chosen incentive rate is better than the traditional scheme with 10% managerial ownership ratio and 20% incentive rate, and (2) what the optimal incentive rate is in the first-loss scheme. We choose the same 10% managerial ownership ratio in both schemes because this number is approximately the typical value in both schemes. In addition, 20% is also a typical incentive rate in the traditional scheme.

With any parameter values considered in the following, the loss-gain ratio in the first-loss scheme is higher than in the traditional scheme, leading to lower fund risk in the former scheme. Therefore, in the following we only consider the utility changes of the manager and investor when the traditional scheme is switched to the first-loss scheme.

It is obvious that the utilities of the manager and investor are increasing and decreasing, respectively, with respect to the incentive rate in the first-loss scheme. We define $\alpha_M^*$ to be the highest incentive rate (in the range $[20\% , 40\% ]$) in the first-loss scheme so that the investor’s utility is not reduced when the traditional scheme is replaced with the first-loss scheme. In other words, $\alpha_M^*$ is the highest incentive rate the manager can choose in the first-loss scheme without losing investors to the traditional scheme. On the other hand, we define $\alpha_I^*$ to be the lowest incentive rate (in the range $[20\% , 40\% ]$) in the first-loss scheme so that the manager’s utility is not reduced when the traditional scheme is switched to the first-loss scheme; i.e., $\alpha_I^*$ is the best incentive rate the investor can expect from the manager. Therefore, $\alpha_M^*$ and $\alpha_I^*$ can be regarded as the “optimal” incentive rates from the manager’s and investor’s perspectives, respectively.

The reasonable ranges of $\kappa$, $b$, $R$, $\eta$, and $q$ are $[0.3, 0.5]$, $[0.4, 0.6]$, $[10\%, 20\% ]$, $[1.25, 3.25]$, $[1.25, 3.25]$, and $[0.3, 0.8]$; thus, we choose the following benchmark values of these parameters: $\kappa = 0.4$, $b = 0.5$, $R = 15\%$, and $\lambda = 2.25$. We can fix any five of the six parameters $\kappa$, $b$, $R$, $\kappa$, $\eta$, and $q$, let the remaining parameter vary in its reasonable range, and plot $\alpha_M^*$ (dash-dot blue line) and $\alpha_I^*$ (dashed red line) with respect to this parameter.

The following figure show just one of them, namely the plot of $\alpha_I^*$ (the optimal incentive rate from the investor’s perspective) and $\alpha_M^*$ (the optimal incentive rate from the manager’s perspective) against the change of the loss aversion degree $\lambda$ of the manager. Plots for other parameters, such as $\kappa$, $b$, $R$, $\eta$, and $q$, give the similar messages.

Because the utilities of the manager and investor are increasing and decreasing, respectively, with respect to the incentive rate in the first-loss scheme, the interval $[\alpha_I^*, \alpha_M^*]$, which is depicted in the figure as the grey region above the dotted line and below the dash-dot line, stands for the range of the incentive rates in the first-loss scheme that make both
the manager and investor better off when this scheme replaces the traditional scheme. We can observe that this interval is considerably large, indicating the possibility of improving the satisfaction of both the manager and investor simultaneously. Moreover, with almost all the parameter values under consideration, 30% is in this interval. Therefore, we conclude that when switched from the traditional scheme to the first-loss scheme with 30% incentive rate, both the manager and the investor are better off.

When the incentive rate in the first-loss scheme is set at 40%, a typical number in the market, investors find the first-loss scheme to be inferior to the traditional scheme. Indeed, we observe from the figure that with most parameter values, 40% is above the dash-dot line, which stands for the highest incentive rate the manager can choose without making the investors worse off. Therefore, with the current practice of the first-loss scheme, investors become worse off when switching from the traditional scheme to the first-loss scheme.

**CONCLUSION**

We propose an analytical framework of studying profit sharing in fund investment, which consists of two parts: (1) Use cumulative prospect theory to compare different profit sharing schemes analytically by solving the utility maximization problems explicitly. Cumulative prospect theory is used because it fits the setting of hedge fund performance fees naturally, leads to analytical tractability, and fits empirical data better than the traditional expected utility theory. We find that the optimal trading strategy is fully determined by the loss-gain ratio of the manager, regardless of the scheme being used. (2) Use the historical attrition rates of hedge funds to calibrate utility parameters in the model. As an application we compare the traditional scheme in the U.S., under which the fund managers own 10% of the fund and get 20% profit sharing, with the 10-40 first-loss scheme (quite popular in China and also emerging in the U.S.), under which the 10% managerial ownership is used to offset any losses first and in return the fund managers take higher profit sharing at 40%.

We find that in most cases, the managers are better off and the investors are worse off in the 10-40 first-loss scheme than in the traditional scheme. However, if we set the profit sharing in the first-loss scheme to be 30%, the satisfaction of both the fund managers and investors can be improved simultaneously by replacing the traditional scheme with this new 10-30 first-loss scheme. In addition, this 10-30 first-loss scheme has lower risk than the traditional scheme.

**REFERENCES**

How do venture capitals accelerate economic transformation? I will explore it from the following three aspects:

1. The background and the status quo of economic transformation and upgrading;
2. The role that venture capital investment should play in the economic transformation;
3. Some thoughts and suggestions.

1. BACKGROUND AND THE STATUS QUO

The present status of our country's economy can be summarized by four words, “big but not strong”, which is mainly manifested in three aspects.

Firstly, low value-added labor and capital-intensive industries are dominant, while innovation capability is not strong, and industrial competitiveness is weak. China’s manufacturing industry ranks fourth in the world, producing 70% of the world's shoes and assembling 60% of the computers, copiers and microwave ovens, but it is relatively inferior in the industrial chain. Data shows that (1) In the U.S. manufacturing industry, more than 50% of the value added is created by high tech, while in China it is merely around 10%. (2) The proportion of the high-tech industries among total industrial output in our country declines year by year: 12.15% in 2000, but dropping to 10.47% in 2011. Although in recent years our high-tech industries have developed rapidly, the traditional industries have grown even faster.

Secondly, in the industrial structure of our country, energy-intensive and polluting industries take up too large a portion, which puts a huge burden on the environment and resources. In 2010 China surpassed the United States and became the world's largest energy, coal, and steel consumer, and the second largest oil and electricity consumer. Between 2011 and 2012, China's GDP accounted for about 9.5% of global GDP and the energy consumption accounted for more than 20% of the global level, while the U.S. GDP accounted for about 20% and energy consumption accounted for only 19%. In other words, our energy consumption per GDP is twice as much as that of the United States. At the same time, China has severe environmental pollution, being the country with the largest emission of sulfur dioxide and carbon dioxide in the world. Every year we lost about 10% of the incremental GDP due to environmental pollution. With the acceleration of industrialization and urbanization, our resources and the environment will be subjected to increasing pressure.

Thirdly, enterprises are lacking the capability of independent innovations. Our enterprise development fund is mainly used for the improvement of existing products and technology. The usage of the fund on new product research and development is just 24% and that of basic research is less than 10%. New product research and development focuses on short-term projects, and the amount of basic study that is long-term and market-oriented is far from being enough. Companies spend much more in technology import than in assimilation and absorption, with an average ratio of 6.5:1, which is the other way round as compared with the case of Japan after World War II with a ratio of 1:7. In our country, applications for invention patents take up merely 1/3 of the total patent applications and the majority of them still have not yet broken the dominant pattern of utility-mode and appearance-design patents.

To sum up, China’s current economic feature of “big but not strong” is obvious, and now we are at the intersection of transformation and upgrading. This year, or within a few years, the main theme of Chinese economy will be transformation and upgrading. In March, Premier Li Keqiang pointed out in China Development Forum that strategic adjustment to the economic structure is the major direction for accelerating the mode of transition in economic development. Premier Li’s basic idea is: from the perspective of demand, the past dependence on investment and exports must be gradually transitioned into being driven by domestic demand and consumption; from the perspective of supply, the impetus triggered by resources and capitals has to be changed into that by innovation; industrial upgrading should transition from low-end manufacturing to high-end manufacturing and services, and the transition is mainly through reform, openness and institution innovation.

That leads to a core question: in the process of economic transformation and upgrading, what is the position of small- and medium-sized enterprises? We believe that
small- and medium-sized enterprises are the principal part of independent innovation and economic transformation and upgrading, and they are the core power to promote the economic transformation and upgrading of our country. The small- and medium-sized enterprises account for 99% of the total number of enterprises in China; they contributed to 60% of the GDP, 50% of the tax, and 80% of the employment in cities and towns; 66% of China’s invention patents and 74% of technology innovation are done by small- and medium-sized enterprises. Things are the same over the world. For example, U.S. innovation is also concentrated in enterprises, with small- and medium-sized enterprises taking up the major part, from which we can conclude that a country’s way to prosperity lies on the impetus and the continuous improvement of small- and medium-sized enterprises.

However, innovation and transformation of small- and medium-sized enterprises are restricted by various factors: (1) their insufficient capability of taking risks; (2) the relatively weak innovation basis; (3) their insufficient innovation fund; (4) lack of regulation in operations; (5) lack of capability to integrate resources; (6) weak sense of innovation. That is also the reason why we need to develop the VC and PE industries to propel entrepreneurial transformation and upgrading.

2. ROLE OF VC FIRMS IN ECONOMIC TRANSFORMATION

It is very obvious that venture capital facilitate economic transformation. International experiences show that venture capital and innovation industry and the agglomeration of innovation industries are closely related. Whether it is Silicon Valley and Route 128 of the US, Israel or Hsinchu of Taiwan, these areas of high VC development are also the most densely populated areas of innovative activities and industries in the world. Domestic practice shows that there is a significant correlation between the venture capital industry and the optimization of regional economic structure. In Beijing, Shanghai, and Shenzhen, China’s areas of higher VC development, the industrial structure, innovation ability and entrepreneur quality are significantly ahead of those in other regions. Beijing’s Zhongguancun, Shanghai’s Zhangjiang and Shenzhen’s Nanshan are the leading innovation centers of the country. At the same time, the scale and influence of venture investment are continuously increasing in our country. According to the results of a research by the National People’s Congress, in 2012, there are more than 5000 private equity institutions, with 59,000 employees and a capital stock of RMB 1.5 trillion. Due to the fact that the regulation of VC/PE is still under preparation, the data is incomplete. Survey shows that by the end of 2012, the number of VC institutions registered with the industrial and commercial bureau of Shenzhen alone had reached 3500, so the number of 5000 from the result of National People’s Congress, is clearly conservative. 2012 is the year of the VC adjustment. According to the information disclosed on investment projects, the number of projects is above 1700 and the investment amount is more than RMB 170 billion, dropping by nearly 50% from 2011, the climax year.

Before 2007, active VC institutions in China are mainly foreign VCs whereas domestic VCs obtained rapid development after 2007. A batch of domestic VCs caught up with their foreign counterparts gradually in both capital scale and investment ability. In the meantime, institution innovation in VC is also making breakthroughs, and VC firms’ contribution to supporting emerging industries is very significant. Statistics from Zero2IPO (Qing Ke) shows that nearly two-thirds of the GEM-listed enterprises have obtained support from VC/PE firms, and many were supported by VC/PE in the initial stage.

In my opinion, venture capitalists should cultivate a business environment that is beneficial for innovation and transformation, and that guides and helps small- and medium-sized enterprises along the development path of transformation with upgrading and independent innovation.

First, VC firms should focus on emerging industries. Table 1 shows the top ten industries of the largest market value in the A-share market, with the top three being banking, petroleum and natural gas extraction, and medical and pharmaceutical products, respectively.

<table>
<thead>
<tr>
<th>Industry</th>
<th>No. of listed companies</th>
<th>Total market value (10 million CNY)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Banking</td>
<td>16</td>
<td>56884</td>
</tr>
<tr>
<td>Petroleum and natural gas extraction</td>
<td>2</td>
<td>19636</td>
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<tr>
<td>Medical and pharmaceutical products</td>
<td>119</td>
<td>10105</td>
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<tr>
<td>Transport equipment manufacturing</td>
<td>99</td>
<td>9909</td>
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<tr>
<td>Real estate development and operation</td>
<td>124</td>
<td>9605</td>
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<tr>
<td>Insurance</td>
<td>4</td>
<td>8704</td>
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<tr>
<td>Coal mining and dressing</td>
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<td>7349</td>
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<tr>
<td>Special-purpose equipment manufacturing</td>
<td>148</td>
<td>7089</td>
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<tr>
<td>Electric equipment and machinery</td>
<td>127</td>
<td>7042</td>
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<tr>
<td>Production and supply of electricity, steam and hot water</td>
<td>62</td>
<td>6607</td>
</tr>
</tbody>
</table>

Table 1. The ten industries with the largest market value in the A-share market
Only the medical and pharmaceutical products industry contains a small number of emerging industries, and the other two are basically traditional industries. Nevertheless, among the top ten VC-invested industries (listed in Table 2), Internet is ranked first, followed by biotechnology/healthcare, with telecom and related value-added services ranking third, and those ranking lower are almost all emerging industries. That is to say, if venture investment is active, great changes will take place in China’s economic structure and industrial structure, gradually leading to a good situation in which emerging industries play an important part.

Secondly, VC should cautiously choose the timing to enter a company. Statistics show that VC typically invest in companies in the initial and growth stages, because companies in those stages are most in need of money and services, in order to facilitate transformation, upgrading and progress.

Table 3 lists the distribution of VC investment at different stages of the portfolio companies. From the table, we can see that the investment at early stage and during growth stage is up to 73% of the total investment. The statistics of SZVC demonstrate that by June 2013, 73 projects out of the total 82 projects that had been invested in were enterprises at their initial and growth stages. Moreover, usually our so-called mature stage is relative to IPO, which is the benchmark point.

The fact remains that many publicly-listed companies in China are still not mature during their IPOs, which means we invest mostly in enterprises at the initial and growth stages, rather than those at maturity. Among the investment cases of SZVC, such as Letv, China Net Center, Savings, etc., they were small and weak when we invested, but now, the market value of Letv, for example, is over RMB 35 billion. Due to the support of VC/PE firms, a multitude of enterprises with growth genes had rapid growth, gradually turning into medium-sized or even large-sized enterprises.

<table>
<thead>
<tr>
<th>Industry</th>
<th>No. of Investment</th>
<th>Investment amount (million USD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internet</td>
<td>162</td>
<td>1579</td>
</tr>
<tr>
<td>Biotechnology/healthcare</td>
<td>124</td>
<td>726</td>
</tr>
<tr>
<td>Telecom and value-added services</td>
<td>103</td>
<td>544</td>
</tr>
<tr>
<td>High-end equipment manufacturing</td>
<td>101</td>
<td>522</td>
</tr>
<tr>
<td>Cleaning technique</td>
<td>86</td>
<td>344</td>
</tr>
<tr>
<td>Information technique</td>
<td>80</td>
<td>381</td>
</tr>
<tr>
<td>Electronic and optical equipment</td>
<td>74</td>
<td>305</td>
</tr>
<tr>
<td>New material/chemical engineering</td>
<td>48</td>
<td>341</td>
</tr>
<tr>
<td>Entertainment media</td>
<td>36</td>
<td>298</td>
</tr>
<tr>
<td>Farming, forestry, animal husbandry and fishery</td>
<td>36</td>
<td>227</td>
</tr>
</tbody>
</table>

Table 2. Top 10 industries in which VC firms invested in 2012

<table>
<thead>
<tr>
<th>Initial stage</th>
<th>Growth stage</th>
<th>Mature stage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quantity</td>
<td>317</td>
<td>427</td>
</tr>
<tr>
<td>Proportion</td>
<td>31%</td>
<td>42%</td>
</tr>
</tbody>
</table>

Table 3. VC investment distribution in industrial stages in 2012
Thirdly, VC should primarily focus on enterprises that are undergoing transformation and upgrading. These enterprises need funding and are faced with the risk of unsuccessful transformation and upgrading, so the support of VC/PE is necessary. Enterprise transformation and upgrading typically fall into three categories: (1) Product change, from traditional products to modern ones. For example, Kingsun, who used to produce steel structural cabinets, is now the biggest supplier of LED outdoor lighting in Asia, which is a typical transformation and upgrading from the traditional to the newly developed. (2) Product upgrading, from low-end to high-end. There are many examples of such companies, like O-film, which used to produce mobile phone camera coating but now has become the world’s biggest touch screen manufacturer, and China Net Center, which leased servers in the past but focuses on server acceleration at present. They were all in the phase of transformation when we entered. (3) Business model transformation, such as from selling products to selling services. Investing in such a stage and the subsequent value-added services can promote the success of enterprise transformation and upgrading.

From the statistics of the enterprises invested in by SZVC between 1999, the year of foundation, and 2011 as the denominator (the data of 2012 may not reach the standard level because some enterprises ran into changes in the economic environment), it is clear that the average annual compound growth rates of operating income, net profit, cash tax, total assets, net assets, the number of workers and other major economic indicators in these enterprises are up to 50%, which is an extraordinary number. From this we can see the strong growth momentum that small- and medium-sized enterprises possess. If we give them financial support and value-added services, they are likely to generate high growth, which also proves the insight of the VC managers.

Fourthly, the companies that VC firms choose to invest in are mainly high-tech companies. Take SZVC as an example. The number of companies and the amount invested in high-tech companies are more than 75% of the total, with the new strategic industries being the most important ones, and the remaining 25% is invested in services, consumer goods and modern agriculture industries, while energy-intensive and polluting industries are off the list.

Fifthly, after the investment is completed, a VC firm must also provide a comprehensive range of resource integration and value-added services to help the companies improve the success rate of their innovations. For instance, SZVC formed a club, where the club members are the founders of the enterprises that have obtained investment from SZVC, and the club holds over 20 activities every year about specific subjects and different industries, so as to provide an opportunity for the enterprises to have resource integration between upstream and downstream, in the industry chain, and in all other aspects. The club has played a very important part to the development of these enterprises.

Sixthly, a VC firm promotes the capital operation of innovative enterprises and guides the transformation and development of the capital market. VC/PE firms depend on IPO for exits, and promoting IPO also helps enterprise standardize their operations. In the recent three years the number of IPOs supported by VC firms reached 498, accounting for more than 60% of the total number, showing that VC/PE firms play a significant role in promoting enterprise capital operations. SZVC so far has supported 89 companies to be successfully listed in 17 capital markets around the world.

Last but not least, there is a demonstration effect of the VC-backed enterprises, guiding the virtuous cycle of the innovation capital, and promoting the society’s sense of innovation and entrepreneurial culture. After successful exits, the enterprises we invested in will take surplus money out and continue to support innovation of other small- and medium-sized enterprises, forming a virtuous cycle of innovation capital.

From the seven aspects above, we can have an idea of the roles that VC/PE firms play in China’s economic transformation.

3. THOUGHTS AND SUGGESTIONS

At present, the environment for VC firms is very austere. From a macroeconomic perspective, the world economy is facing huge uncertainty, China’s economic slowdown has become an event of great probability; domestic capital markets are in the doldrums; IPO has been suspended for nearly a year, with more than six hundred companies waiting for approval. From the perspective of the VC industry itself, a large number of VC/PE funds that were established after 2007 have entered the liquidation period, the cash-out pressure on the projects is very high; At the same time, both fund-raising and investing are now entered an adjustment and transformation phase: dropping by up to 50% in 2012 from 2011 and continuing to fall by 50% in 2013. Management tasks are very heavy: the key task of VC/PE organization this year is not investment but the management of the existing projects. The overall situation is pessimal: the main path of IPO is blocked, and M&As are not easy to carry out and their returns are not high. Therefore, the VC/PE industry is now in a very difficult and awkward time.

Under such a difficult and awkward condition, how can the VC/PE firms “breakthrough”? I would like to suggest the following:

(1) Restart IPO in the capital market as soon as possible. If IPO is halted, it is hard for VC firms to continue existing and developing; if the VC industry retrogresses, there will be a huge influence on the innovation activities of small- and medium-sized enterprises. Therefore, the IPO restart is imperative and the sooner the better.

There is this important question: Will IPO exert a significant
impact on the stock market? It is actually a pseudo-proposition that restarting IPO will shunt stock market capitals. We have made statistical comparisons of the fund that IPO raised in total, the fund that IPO raised for those listed in SME board and GEM from which VC typically exited, and the amount of designated placement from 2010 to the first half of 2013, and the results are listed in Table 4.

From Table 4, we can see that only in the most active year, 2010, the fund that IPO raised surpassed the designated placement, while in all the other years it was the other way round. In 2012 the fund that IPO raised for those listed in SME board and GEM accounted for only 14% of the entire designated placement, which is a very small proportion. The capital market demonstrates that designated placement does not shunt capitals, so the statement that IPO would divert funds is a false proposition. The problem of the stock market is not caused by IPOs but is due to the lack of credibility. Causes of the credibility issue should be examined from other aspects. For instance, there is a very negative evaluation of the secondary market, and a negative term called “chao gu piao” (meaning speculating on stocks). In fact, investment in the secondary market is very important; without a good secondary market, there is no good primary market; without a good primary market, there is no entrepreneurial innovation.

(2) Solve the full circulation problem of H shares as soon as possible. The Hong Kong market needs to list good Chinese companies, which are certainly to run into the problem of full circulation. Though there is a positive change this year, it is still hard to tackle the full circulation problem. If the bottleneck to the full circulation of the H shares can be removed, the H shares can shunt some of the stress of A shares. Then, there will be multiple options for Chinese enterprises’ capital operations, and there will also be multiple channels for VC/PE firms to exit.

(3) Encourage Chinese companies to get listed in foreign markets. For example, the stock price of a solar-energy company that SZVC invested was US$2 at the lowest point this year but now has risen to US$23, which means it has increased by 10 times. Laws and policies should encourage the rebound of Chinese-concept stocks.

(4) Advance the establishment of guiding funds. The LP structure is different between China and foreign countries. The Chinese government should, by the way of guiding funds, promote the construction of mother funds, encourage state-owned capital, pension funds, and surplus capital of large enterprises to join the LP, and optimize the LP structure, so that venture capital can grow in a state that is more rational with better judgement.

(5) Encourage large VC institutions to launch the asset management business. Mixed operations in the “grand asset management age” is an irresistible trend, so large VC/PE institutions should be expanded to the fund management category. Encouraging large VCs to develop other fund management business to adapt to the “grand asset management age” is also an important aspect in the healthy development of VC/PE.

(6) Strengthen the public understanding and support of VC/PE. In our society there are some incorrect opinions about VC and PE, such as non-tradable share reduction, poor understanding of repurchase agreements, and the evaluation of “pennies from heaven”. VC/PE firms need a good public opinion environment to grow in a healthy way, to provide more support to the transformation and upgrading of China’s small- and medium-sized enterprises, and to make China’s economy develop gradually from “big but not strong” into “both big and strong”.

<table>
<thead>
<tr>
<th>Year</th>
<th>IPO (RMB100m)</th>
<th>IPO in SME board and GEM (RMB100m)</th>
<th>DP (RMB100m)</th>
<th>IPO/DP</th>
<th>IPO in SME board and GEM/DP</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>4921</td>
<td>3022</td>
<td>3510</td>
<td>140%</td>
<td>86%</td>
</tr>
<tr>
<td>2011</td>
<td>2720</td>
<td>1753</td>
<td>3877</td>
<td>70%</td>
<td>45%</td>
</tr>
<tr>
<td>2012</td>
<td>955</td>
<td>501</td>
<td>3480</td>
<td>29%</td>
<td>14%</td>
</tr>
<tr>
<td>1st half 2013</td>
<td>0</td>
<td>0</td>
<td>2038</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

Table 3. VC investment distribution in industrial stages in 2012
Comparisons of PE Decision-Making under Different Investment Environments: Differences between the Chinese and Overseas Markets along with Their Impact

YICHEN ZHANG, CITIC Capital Holdings Ltd.

ECOSYSTEMS OF PE AND VC IN THE U.S. AND CHINA

Today I would attempt to give a more rigorous presentation on the differences between Chinese and overseas markets. Although we operate in all these markets, we had never tried to put it down on paper in terms of what the differences are until the Chairman of this forum asked me to give a talk on this. A lot of these differences are fairly intuitive, but to our investment professionals, the differences actually are quite meaningful. Actually, the comparisons will shed some light on investment insights. In terms of actual comparison, I would separate it into sourcing, deal execution, and then post-investment and exit.

I’ll firstly analyze the overall ecosystem of PE and VC in the US vs. China (here I use “US” as a sort of proxy for the developed market). China’s PE market overall is still very young. I think the history is only about probably 15 years old or slightly longer than that. The US and the western European markets obviously are much more mature and sophisticated.

First, in terms of infrastructure, in the US, there is a very mature and very sophisticated intermediary network as well as financing and the legal infrastructure and resources. There are many advisory shops set up specifically for diligence resources. And at the same time, for post-investment management, there is a very deep pool of professional managers.

Second, in terms of information, there is much less information asymmetry in the US. Data and information typically are available and the resource reliable. For even the most detailed industry data, as long as you are willing to pay, you should be able to get your hands on them. Then in terms of regulation, the US regulatory framework for venture PE dated back to basically “1941 Investment Act”. So it’s a very mature, transparent, and simple regulatory framework. There are not a whole lot of things that you need approval on, although as a foreign investor in the US, we do at times go through the CPS approval process.

Finally, in terms of investment talents, the investment professionals tend to be more spread out in a sense that they are not so concentrated. In our market, investment professionals are concentrated in Hong Kong, Beijing, Shanghai, and in Shenzhen as well. But outside these places, you don’t see a lot of private equity investment professionals. In the US, they are much more spread out. You have PE firms in Cleveland, in Cincinnati, in Chicago, in Seattle, and in Denver…. They are basically all over the country, and they are also far more experienced and have been through many cycles in the US. That is an overall and high level comparison between the two markets.
DEAL SOURCING

In terms of actual deal experience and deal sourcing, in China, as we know, everything is relationship-driven, and the most important aspect of a PE investor's job is to get good deals, so deal origination capability is the most important criteria for selecting an investment professional. In the end, deals are typically initiated through personal contacts and personal networks, and most of the deals actually are proprietary deals.

On the US side, the top private equity firms no longer value the origination capability of investment professionals, because almost every deal is an auction deal. Every deal goes through a process by picking firstly an intermediary, then the deal information is sent out, and then the teasers are sent out to potential investors. It’s a very rigorous process and soon the deal gets done. Therefore, investors compete not based on closer relationship with the seller and so on so forth. The investors compete on their ability to understand the industry so that they can see angles that others do not see and will bid higher and win the deal. Hence it’s more about industry knowledge and industry insight, and much less about relationship. In fact, relationship almost doesn’t even count.

In China, also you have the phenomenon of first generation entrepreneurs selling their businesses, so in many cases price often is not the only consideration, because in most cases, it’s a growth capital type of deal. They want a higher price but at the same time they want to make sure the investors coming in can work with them and can also bring other resources—basically and potentially bring strategic value.

On the US side, everything is about price, so there is a sophisticated large intermediary network and all that in place just to ensure every deal is a competitive deal. Because of that, on the US side, GPs tend to be much more specialized. They tend to have industry sector focus, because unless you are very specialized, you are only a generalist. It’s very difficult to win these deals if you don’t know what you are doing. You can blindly bid higher but in the end, you may suffer on the other investment result front. We work with many private equity firms in the US, because we have done almost 20 investments in the mid-market space. It’s very interesting.

In China, if we decide to team up with a partner as a Chinese PE investor, it’s largely about the people in this firm being nice or not, and that we can work with them well or not. Even among investors, forming PE firms and forming consortium, it’s more about relationship as well. On the US side, when we pick partners, it’s actually more about industry specialization. If we invest in an auto part company, we have one set of investors. If we invest in a consumer product company, we will think of another set of PE firms that its partners could potentially work with.

DEAL EXECUTION

In terms of deal execution, there is a huge difference as well. In China, there is, for most deals, no clear timeline, so deal can drag on for a very long time. For example, in China, our China front tends to focus on a lot of SOE privatization deals and we were well-known in the market for that. We have done the SOE privatization for Harbin Pharmaceutical, for Guanshengyuan in Shanghai, and for many of these types of deals. These deals take up very long time to work on, because you need to work on the management, you need to work on local government officials, and then finally, when they more or less believe, they’ll endorse you as a new shareholder to come in. Then the official process actually starts and then various levels of approval.

In the US, it’s a lot simpler. Everything is process-driven. The intermediary send you the information, give you very clear timeline that you need to do due diligence in, for example, a month, and then they initiate due diligence and you put in an initial bid. Then they have a short list. On the short list, they give you another period of time for further due diligence. Then you need to submit a binding bid, and then there is negotiation and everything else. To them, the deal certainty is extremely important to the seller. So by the time you’ve submitted binding bid, they want to consider not only your price, but also whether you have arranged all the financing, what sort of conditions you have attached to your binding bids and so on so forth.

On the China side, overall it’s mostly growth capital driven, so there is basically no leverage. Therefore in terms of arranging leverage, finance, loans and so on so forth, those issues are not really there. The decision making overall on the China side is more difficult, although we try to do as much rigorous analysis as possible. For every deal we do on China side, we do clearly build investment models, mathematical models, and so on so forth. But in China, in most cases, because company histories are short, the macro environment is very volatile, so inevitably, in the end, you tend to rely more on intuition than experience. Also there is only so much number crunching that you can do. A few years ago, I was in New York and talking to a group of very senior people at Blackstone. One of their leading partners said something very interesting. In the US, when you do these leverage buyouts, you make assumptions on potential growth, and you struggle between putting in a 3% growth assumption or a 3.5%, because with all of the leverage piled on and all that, even though there is 0.5% difference, it actually makes a great difference in terms of the overall investment rationale. However in China, the order of magnitude is easily ten times. You make assumptions on whether it’s going to grow by 10%, 15%, or 20%. Those are the type of differences. Hence when you are talking about that sort of order of magnitude in growth assumptions, then in the end, it’s more about macro judgment. It’s more about intuition. It’s definitely more qualitative than quantitative. Partially it’s also because there is a lack of data on China side. You can
only analyze so much. The due diligence resource is limited. It often really requires proprietary work on our side.

On the US front, after all the analysis, everything comes down to the model you built. For example, we have a separate team doing US deals. This group of professionals is meticulous in terms of every number. How do you back up for every one of the numbers? For every one of the numbers, there is so much data supporting it. In the end, because there is more data in the market, and these data are far more reliable, because these are companies typically having a very long history, so it has a very long operating history, operating in a macro environment that has gone through cycles. Therefore you know the best case and the worst case to expect. Hence decision making overall is much more quantitative, much based on very rigorous data analysis. At the same time, there are plenty of industry deep-dive resources that you can hire, while the same cannot be said about China.

POST-INVESTMENT AND EXIT

On post-investment and exit, here again there is a huge difference, because in China we are actually known for doing control deals, which separates us from most of the market, which is done mainly by growth capital. In our case, even with control, post-investment value creation is primarily dependent on the founder or on the existing management team. In China, if you are going to investment with the assumption that you are going to change the management team, our advice is that you don’t do the deal, because that would just be way too messy. But we want to have control. We reserve the right just in case it’s not working and we have to change. Now in most of the investments in China, the investors don’t even have that right because they are typically in minority position. Thus in China, it’s difficult to remove or replace existing management and the governance rights sometimes are very difficult to enforce.

While in the US, it’s very clear. Private equity and particularly buyouts have a very long history for value creation and the typical levers of these value creation already are identified very clearly in the due diligence process. That’s why in the US for these buyouts you have so called 100-day plan, because once you are going to the company, you know exactly what to do for the first 100 days to try to push all these levers for value creation. In the US, there are very clear intense incentive systems and structures and option plans for management, and there is clear governance right. Management team can very easily be replaced, and the talent is very easy to find. In addition, it’s very easy to relocate experienced management teams. In China, if you hire experienced and high caliber management teams, it’s very difficult to move them, say, from Shanghai to even as close as Anhui. In the US, you never have that issue. People can relocate very easily, because they are living in an environment that is largely the same.

On China side, there are a lot of challenges in terms of what sort of post-investment value creation you can do. At the same time, there is also exit issue. Historically the exits are mostly by IPOs, and the secondary buyout and M&A only start to emerge. In fact, our fronts have two exits this year through secondary, basically trade sales, which is actually rare in this market.

While on the US side, almost all the exits are through trade sales, particularly in the mid-market space, and the system is very well-established. We have done almost 20 investments in the US. We have about so far 5 or 6 exits and they are all through trade sales. Once you start running a process, there are plenty of buyers. You may not necessarily get the price you want, but there is always buyer and in the end, you can sell a company if you want. IPO is an option, but it’s not the main option for mid-market space. It’s typically for very large leverage buyouts.

OUR ADVANTAGE

Those were the comparisons. The reason we can at least talk with some knowledge based on the subject is because we, in addition to operating a China front, also have two outward investments—outbound investment front—one is international front which tends to focus on US and EU and at the same time we also run a Japan front. Hence among the Chinese PE firms, we are the leader in this aspect. There are many examples we have given here as well that demonstrate the success of these products.