INVESTING IN PRIVATE EQUITY

THE JAPAN ROUNDTABLE ON ALTERNATIVE INVESTMENTS

オルタナティブ投資プログラム
東京ラウンドテーブル

Tokyo, Japan

Program on Alternative Investments
Center on Japanese Economy and Business
Columbia Business School

コロンビア大学ビジネス・スクール
日本経済経営研究所
オルタナティブ投資プログラム
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FOREWORD

Although Japanese institutional investors continue to favor hedge funds and funds of hedge funds over other alternative investments, more and more Japanese pensions, banks, and insurance companies are now seriously exploring opportunities in private equity.

How can Japanese investors effectively identify and conduct due diligence on promising private equity funds? If such funds prove attractive, how can they obtain access in cases where capacity is limited? Once invested, what methods are available to these investors to accurately value the private equity portfolios and monitor the ongoing operations of their fund managers? And how should they measure these managers' performance?

To examine these and related questions, the Program on Alternative Investments hosted its second seminar and roundtable in Tokyo on March 11, 2005. Organized and moderated by Dr. Mark Mason, Program Director, the seminar and roundtable featured as principal speakers Andrew Golden, President of the Princeton University Investment Company (Princo); John Alouf, Senior Investment Officer, Private Equity, at the Virginia Retirement System (VRS); Toru Masuda, Senior Manager in the Global Credit Investment Management Department of Sumitomo Trust & Banking; and Akihiro Nakamura of the Pension Fund Association of Japan.

These proceedings were divided into two main sessions. The first session was in the form of a seminar with participants drawn from the Japanese public and private pension fund communities, and the second session was in the form of a roundtable discussion with representatives from the Japanese banking and insurance communities. This report covers the initial presentations by the featured speakers together with the subsequent question and answer periods that followed.

Mark Mason, Ph.D.
Director
Program on Alternative Investments
Center on Japanese Economy and Business
Columbia Business School

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Toru Masuda, Senior Manager, Global Credit Investment Management Department, Sumitomo Trust & Banking Co., Ltd.
“Introducing Private Equity Investment”

John P. Alouf, Senior Investment Officer, Virginia Retirement System
“Developing a Successful Private Equity Program—A Pension Plan Perspective”

Discussion
Golden, Masuda, and Alouf, moderated by Akihiro Nakamura, Pension Fund Association of Japan

Themes
- Valuation of Private Equity Portfolios
- Measuring the Performance of Private Equity Investments
- Managing Illiquid Assets such as Private Equity
- Manager Selection
- The Secondary Market for Private Equity and Implications for Pension Funds
- How to Incorporate Private Equity into a Diversified Investment Portfolio

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SPEAKER PROFILES

ANDREW K. GOLDEN
Andrew K. Golden has served as President of the Princeton University Investment Company (Princo), the organization responsible for managing Princeton’s endowment, since January 1995. During that time, the assets of the endowment have grown from under $4 billion to more than $10 billion, after net withdrawals of approximately $1.25 billion to fund University operations.

Princo’s investment returns for the most recent ten fiscal years (ending June 30) were 15.5 percent, placing Princo among the highest performing endowments in the country. The endowment is broadly diversified and invests in United States and foreign public and private equities, independent return funds, real assets, and fixed income.

Mr. Golden joined Princo from Duke Management Company, where he was an Investment Director. Prior to that time, he served as a Senior Associate in the Investments Office at Yale University. Mr. Golden holds a B.A. from Duke University and an M.P.P.M. from the Yale School of Organization and Management. He has earned the Chartered Financial Analyst designation and is a member of the New York Society of Security Analysts. Mr. Golden was a member of the Board of Directors of the NAB Asset Corporation, a publicly traded commercial loan workout specialist. He currently serves on fund advisory boards for several private equity and venture capital managers, including Bain Capital, General Catalyst Partners, and Venrock Associates.

In addition to his work at Princo, Mr. Golden serves as a Trustee of The Nathan Cummings Foundation, the Princeton Area Community Foundation, and Rutgers Preparatory School. Mr. Golden is married to Carol Litowitz Golden, resides in Princeton, and has two young sons who, despite their genetic heritage, are quite athletic.

TORU MASUDA
Toru Masuda is currently in charge of private equity investment, supporting affiliate companies’ business activities, and developing private equity-related business for Sumitomo Trust & Banking Co., Ltd. Since joining the bank in 1988, Mr. Masuda has developed expertise in various fields, such as M&A advisory, direct investment to venture companies, and business consulting. In addition, he was located in the London branch from 1996 to 2000, managing investments in Japanese high-yield bonds and emerging market portfolios. Since 2000, he has been on the PE investment team in Tokyo, playing a key role in fund management.

Mr. Masuda, CFA, graduated with a B.A. in economics from Osaka University.

JOHN P. ALOUF
John Alouf is a Senior Investment Officer at the Virginia Retirement System, the state’s $43 billion pension fund. Mr. Alouf is part of a three-member team responsible for expansion, management, and oversight of $7 billion in private equity commitments. The investment portfolio of the private equity group consists of approximately 200 partnership interests allocated between venture capital, buyout, growth capital, mezzanine, distressed, and energy funds. Prior to joining VRS, Mr. Alouf was an associate at Private Advisors, a private investment firm focused solely on alternative assets. He also worked for Cambridge Associates, a financial consulting firm, as an investment performance analyst. He received an M.B.A. from the College of William & Mary and a B.B.A. from James Madison University.
MARK MASON

Mark Mason is Director of the Program on Alternative Investments. He was formerly a tenured professor of International Business at Georgetown University and prior to that a professor at the School of Management, Yale University. His current research examines the evolving strategies of Japanese institutional investors in hedge funds, private equity, and other alternative investments in Japan and abroad.

Dr. Mason is the author of American Multinationals and Japan (Harvard University Press) and Europe and the Japanese Challenge (Oxford University Press), as well as numerous articles in leading business and management journals. In addition, he has been widely quoted in publications such as Business Week, the Economist, the Financial Times, the New York Times, and the Wall Street Journal. Dr. Mason frequently speaks at conferences on alternative investments. He holds a Ph.D. from Harvard University.

AKIHIRO NAKAMURA

Akihiro Nakamura has served as Leader of the Pension Management and Evaluation Group, Pension Fund Association, since 2004. After graduating from the Meiji Gakuin University Faculty of Law in 1987, he joined the Pension Management Division, transferring to the Ministry of Health and Welfare (currently called the Ministry of Health, Labour and Welfare), Pension Bureau, in 1990 and then to the Japan Center for Economic Research in 1999. In 2000, he became Chief of the Investment Research Department of the Pension Fund Association.

Mr. Nakamura was selected as one of the “25 remarkable pension officials in the world” by Pensions & Investments magazine in 1999. He is also a member of the Security Analysts Association of Japan. His publications include Kakei no Kinyu Sisan Sentaku to Shibun Haibun (Household Financial Asset Selection and Asset Allocation), Japan Center for Economic Research; and Kinyu Fukyo no Jissyo Bunseki (Positive Analysis of Financial Depressions), Nihon Keizai Shimbun, Inc.
PART I: THE PENSION FUND SEMINAR ON PRIVATE EQUITY

MARK MASON
Director
Program on Alternative Investments
Center on Japanese Economy and Business
Columbia Business School, Columbia University

This forum is designed to facilitate objective and frank discussion of alternative assets from the viewpoint of the institutional investor. The first meeting of the series was held this past December in Tokyo, and the theme was investing in hedge funds and funds of hedge funds. Our second meeting today examines investments in private equity. We have selected a number of general themes to explore, including the valuation of private equity portfolios, manager selection, performance measurement, and the secondary market.

Our lead speaker this morning is Andrew Golden, President of the Princeton University Investment Company (or Princo). Princo is generally considered to be a member of the “golden circle” of U.S. university endowments when it comes to investment management and performance. I understand that 2005 marks the tenth year Andy has managed the endowment at Princeton, during which time assets have grown from less than $4 billion to more than $10 billion.

ANDREW K. GOLDEN
President
Princeton University Investment Company

Thank you, Mark. I would first like to explain our investment philosophy. I’ve been involved in endowment management for two decades, but before that I had a separate career as a professional photographer and also studied philosophy. These different hats have created the context of how I think about endowment management, which I call the blues philosophy. To borrow the words of the great blues singer Mose Allison: “I don’t worry about a thing because I know nothing is going to turn out all right.” This captures a key element about investing: nothing ever turns out as one expects.

In order to discuss how we approach private equity investing, it’s important to understand our endowment and how we think about investing in general. We take a very holistic view. We try not to separate our thinking into buckets, but to take similar approaches across the entire portfolio based on our objectives and goals.

The endowment is large for a university endowment. At the end of our last fiscal year on June 30, 2004, our assets were worth roughly $10 billion. We’re now almost $11 billion, making us one of the largest endowments for a U.S. university in terms of dollars per student. It’s a critical resource for the university, contributing almost 40 percent of the revenues for the whole school.

Our goal for the endowment is to spend it and support the university, to provide the same benefits to future generations as it does to the current generation. That means we need to have a consistent, high rate of return over time. We try to spend between 4 percent and 5 percent each year, and we think of inflation as a number that’s of similar magnitude. We need to build up a reserve fund because we know we won’t be able to generate returns of 9 percent each year, which means we need to look at 10 percent or so in returns year after year.

And we have achieved that. The endowment has grown at a rate of 12.2 percent over the last couple of decades, reflecting investment performance. While there are gifts that come in each year, they are less than the amount of money that we spend.

Everything we do is through a partnership with an external money management firm. We don’t do any hands-on investing for several reasons. We want to have the world’s best experts at the helm of each of our ships in our very big fleet. With all the different categories we invest in, we don’t think we could develop that kind of world-class expertise within our own organization. In any one area, we would be competing against firms that have more people, more specialized knowledge, and more experience targeting that specific area. By partnering with them, it exploits one of our competitive advantages.

Partnering also gives us flexibility to fine-tune the portfolio by changing our exposures with some phone calls. We have sixteen investment professionals managing more than a hundred relationships. Interestingly, about a
third of the time we spend making decisions is directed at private equity. Private equity is one of the most labor-intensive areas in which we invest, even though it represents less than 15 percent of the portfolio.

While I've been at Princeton for ten years, it's only been the last five years that I can truly claim that I was the Chief Investment Officer. Prior to that, it was the Chairman of the Board who approved every single significant decision. Since gaining this new authority, we have been very active in fine-tuning the portfolio. We moved more than $7 billion worth of funds around our manager roster by fine-tuning the dollars to exploit specific opportunities as they've come up. We kept track of how our portfolio would have performed without that fine-tuning and found out that we would have made $860 million less. I mention this to point out that we can be very active in the management of the portfolio even though we are not on the front lines.

Our chief advantage is our very long horizon. Spending less than 5 percent a year, we do not have much need for liquidity. This gives us a chance to take a long-term view and to help others that need liquidity. Another important advantage is what we call our "Goldilocks" size, which refers to the endowment being not too big or too small, but just right. At $11 billion, we are big enough to cost-effectively support a research staff that can understand alternative investments and find opportunities off the beaten path. But we are not so big that those opportunities cannot have a meaningful impact on our bottom line.

We take a multistep approach to asset allocation. First, we think about things in a valuation-independent framework. We don't think about what is going on in the markets today. Instead, we think about basic investment truths, our distinctive circumstance as an investor, and about what mix would make sense over a very long horizon.

A basic investment truth, for example, is the idea that investors demand return, and, over long periods of time, they should receive compensation for any discomfort, like not being able to get your money when you need it, painful market volatility, or the inability to see through your portfolio. The list goes on and on. But we know it would not make sense for there not to be a reward.

About 88 percent of our portfolio is invested in equity or equity-like positions (see Slide 10). We need to do that to earn those high returns, but only 17 percent is invested in traditional domestic equity. A similar amount is seen in our international equity holdings, which is roughly split between developed and developing markets. About 25 percent is invested in a category called "independent return," a subset of the hedge fund universe. It involves managers who go long and sell short and managers that exploit event-driven investments, like bankruptcy or companies undergoing significant corporate change. About 15 percent is private equity, while 14 percent is in real estate, which also includes energy and timber.

Our performance has been strong over time (see Slide 12). If you look at the difference between our portfolio's return over ten years, it's been up 15.5 percent per year versus our main benchmark that's been up 11.7 percent. Private equity has been the strongest-performing asset category at almost 20 percent, but it's gotten there the hard way. The year 2000 was very strong, but it hasn't been most recently. But this is part of our program. We know that over time some categories will do well and some categories won't, but over time, it will balance out.

Here's a flavor of our actual private equity program, which is about $1.1 billion. There's $1.8 billion in outstanding commitments waiting to be drawn down by eighty-nine different managers. Of those eighty-nine managers, fifty-two are active partnerships. We have invested mostly in the United States but have made investments with managers based in the UK, Italy, Scandinavia, China, India, and even Japan. We are making an effort to find more partners outside the United States because we sense that local managers have an edge and should understand their own environment better.

Until recently, we thought that there weren't a lot of experienced investors outside the United States, particularly in private equity. That is changing, so we now have a grand unifying theme for our entire program: to build up our international network of managers and other sources of intelligence to the level in the United States. That is one reason why I am here today and why I have traveled to Asia five times in the past fifteen months.
The private equity program has been a key source of strength (see Slide 21). In the year 2000, for example, the endowment overall returned 35.5 percent. It would have been less than half of that if we had not invested in private equity, particularly venture capital. That said, private equity has been a drag on our returns more recently, but that’s okay. It goes back to our concept of diversification; we know that not everything is going to be helpful all the time.

The important thing to understand about the valuation of portfolios is that it is more art than science. Even in marketable areas, the true value of your portfolio is a bit more of an illusion than many would like to think. I contrast private equity, for example, with the NASDAQ market. Do we really think that the value of the market, which is stated with great precision at any given moment, could be that volatile? Could the true value really change that much, and, given the size of our portfolios, is it really a true value anyway? We know we could not liquidate the whole portfolio at that price. Yet there is an illusion in public markets that you know the value of your portfolio.

When we do our own valuations, we start with a number provided by the general partner, and, if warranted, we’ll revise it down. The managers themselves are operating with great flexibility, and there aren’t any ironclad industry standards. For example, a venture capitalist will tend to value a portfolio at cost unless someone else comes in and provides additional financing at a higher price. Venture capitalists will also write down a portfolio if there is reason to believe the intrinsic value has been impaired. In the buyout world, the standards are much more flexible.

Here’s an unusual question: Why should we care what the value of the portfolio is? Valuations can be used to evaluate our program or managers, but we think that there are better ways to assess and understand this. That said, while there’s great imprecision to our valuation methods, there seems to be a conservative bias. We get back more money when investments are liquidated than what they have been marked at.

We look at performance in a variety of ways. There are different questions that we ask, including dollar rates of return or internal rates of return (IRRs). If we look at our performance over ten years, 60 percent of the returns can be explained by cash we’ve already gotten back from the program. We don’t have to worry about the value of that. In fact, if we were to write the portfolio down to zero, or not give credit for the market value right now, the program still would have been very profitable and strong.

When U.S. investors measure performance, they traditionally look at managers versus similar funds or apply the so-called vintage fund analysis. This sheds more light than looking at the overall program. The actual performance is less important than figuring out what’s been driving performance. We really care most about performance because we want to know how we should act in the future, which is why we emphasize quantitative analysis to see whether it’s reputable.

Our holistic approach to managing our portfolios is highly labor intensive. We focus on manager selection and use a bottom-up approach. Finding crude investors is more important than having a top-down view of where to invest. Our top-down analysis is more about where we’ll spend time to search for managers, but we never force money to work if we cannot find a good partner.

A new phenomenon is that we find ourselves selling ourselves to managers even though we are buying their services. The best managers can be highly selective, so we have to make a point as to why they should select us over others. We show prospective managers the benefit that we brought to others, and our goal is to be the best client. We do that by working creatively with them to solve some of their business risk issues. One way we can do that is by being very flexible, including things like diversification limits. If they find something really good, we can be flexible and let them invest a large share of the portfolio in one way or another. This makes sense because the risk to us is much less than it is to them since they are just a small part of our portfolio.

What do we look for in managers? Most important is their ability to add fundamental value to a company. This is the key advantage of private investments: the ability of managers to make a company better. We think it’s important and obvious that a manager should have the ability to see the best deals. They should be very smart. They
should negotiate well and have discipline. They should also understand risk and have a high moral character. The firm should make sense and promote stability over time.

We are very selective with funds. Last fiscal year we invested in four venture capital funds out of the sixty-five deals we looked at and under 7 percent in buyouts. The secondary market is not really of much interest to us.

From time to time, there are attractive purchases, but most likely we make that purchase to strengthen our relationship with a great manager.

Private equity is a great long-term fit for Princeton, but it may not be for you. It’s important to have the competitive advantage; otherwise, private equity could be a disadvantage.
The endowment grew considerably during the ’80s and ’90s (fiscal year-end values)

Princeton University Investment Company

Princeton University Investment Company

Princo’s organizational model evolved in 1998

- Board to focus on policy issues, including long-term asset allocation
- Board structure rationalized
- Transfer of CEO authority to Princo president
- Staff responsibilities:
  - Prepare working hypothesis for policy issues
  - Implementation, including manager selection
- Princo re-assumed oversight of Alternative Asset Funds Program in Fiscal Year 2001

Princeton University Investment Company

Princo has been active under the new organizational model

Funds moved $7.3 billion
$ Value added $863 million

Princeton University Investment Company

Princo seeks high returns

- Actively manage portfolio to create added gains
- Demand excess compensation for all risks incurred
- Capabilities on natural advantages
  - Long-horizon, low liquidity needs
  - Endowment size
  - Skill and experience of directors, Advisory Committee, and staff
  - Previous reputation
  - Network of alumni and friends
- Beat benchmarks; achieve top quartile results over extended periods

Princeton University Investment Company

Princeton Policy Portfolio

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**SLIDE 17**

Princeton Asset Class Performance Calendar 2000

![Graph showing performance by asset class for Princeton University Investment Company in 2000.]

**SLIDE 18**

On a five-year basis, solid results were achieved across all asset classes

![Bar chart showing annualized 5-year returns relative to benchmarks.]

**SLIDE 19**

On a ten-year basis, all of our asset classes have outperformed

![Bar chart showing annualized 10-year returns relative to benchmarks.]

**SLIDE 20**

Princeton’s Private Equity Program

- Buyouts
  - $695 million market value; $1,270 million more committed
  - 95 funds; 55 managers (29 active)
- Venture capital
  - $430 million market value; $525 million more committed
  - 89 funds; 34 managers (23 active)
- Mostly U.S.; also UK, Italy, Scandinavia, China, India

**SLIDE 21**

The Private Equity Program is a source of long-term strength

![Graph showing the performance and growth of Princeton University Investment Company’s private equity program from FY 1995-2004.]

**SLIDE 22**

Valuation of Portfolios

- Hard; more art than science
- We start with GP numbers; revise downward if warranted
- No ironclad industry standards
  - VC tending to standard
    - Cost or less, unless additional financing with new participant (strategic investors adjusted)
  - Buyout less standard
    - Discounted comps; EBITDA adjustments; cost

[End of document]
Valuation of Portfolios (cont.)

- WHY DO WE CARE?!?!?!
- The difficulty is partly the cause of the opportunity
- We emphasize qualitative and fundamental analysis in evaluations
- Aside: valuations have conservative bias

Measuring Performance

- Different questions, different answers:
  - Dollar and time weighted
  - Again, very difficult
  - Valuation problems
  - BUT valuations matter less than they appear
  - Ultimately, we get cash back
- Cohorts and vintages
- What are drivers? What is repeatable?
- Can you adjust for risk?

Managing Private Equity and Other Illiquid Assets

- Princo takes holistic approach
- Labor intensive
- Qualitative and quantitative analysis
- Bottom-up focus
- Continuity important
- Selling and buying
- Our goal

Manager selection is critically important

- Index returns are unattractive compared to other asset classes
- Indices are skewed
- Whom you invest with matters more than when (selection matters more than timing)

Private assets underperform marketable securities

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<tr>
<th></th>
<th>Venture Capital</th>
<th>Growth Equity</th>
<th>Private Equity</th>
<th>Real Estate</th>
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<tr>
<td>Mean</td>
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<td>14.5%</td>
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<td>16.5%</td>
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<tr>
<td>Median</td>
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<td>24.0%</td>
<td>28.0%</td>
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</table>

The private equity benchmark is dominated by a small handful of funds, particularly in venture capital
**SLIDE 29**

Manager Selection vs. Timing

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<tr>
<th></th>
<th>Best Managers in All Years (avg. of top-quartile cut-offs)</th>
<th>Median Managers in Good Years (avg. of median return for top-half of vintage years)</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Venture Capital</td>
<td>41.7%</td>
<td>38.8%</td>
<td>2.9%</td>
</tr>
<tr>
<td>Buyouts</td>
<td>23.9%</td>
<td>18.1%</td>
<td>5.7%</td>
</tr>
</tbody>
</table>

Source: Cambridge Associates, 12/31/00. Vintage years 1981-98 (venture) and 1986-98 (buyouts).

**SLIDE 30**

What do we look for?

- Ability to improve fundamental value
- Deal flow advantage (inefficient sector)
- Analytic edge
- Negotiation skill
- Discipline

**SLIDE 31**

What do we look for (cont.)?

- Risk sensitivity
- Moral character
- Firm chemistry >>> stability
- Aligned interests
  - GP vs. LP
  - LPs
- Good fund terms/structure

**SLIDE 32**

Princo is highly selective

<table>
<thead>
<tr>
<th></th>
<th>Venture Capital</th>
<th>Buyouts</th>
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<td>Committed</td>
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<td>$93.0 mil</td>
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<th>New Relationships and Vehicles</th>
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<tbody>
<tr>
<td>Committed</td>
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<td>4</td>
</tr>
<tr>
<td>Declined</td>
<td>61</td>
<td>98</td>
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</tbody>
</table>

**SLIDE 33**

The Secondary Market

- We do not sell
- Do not assume it is available
- Attractive buys available opportunistically
- IRR boost (but re-investment risk)
- We seek quality, not just price
- We do it ourselves, not through specialized funds

**SLIDE 34**

Concluding Comments

- Good long-term fit for Princeton
- May or may not be for you
- May not be the best time for entry in the U.S.
- The attractiveness of private equity in other countries depends upon several factors