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A POWERFUL PERSPECTIVE

THE MAINSTREAMING OF REAL ASSET INVESTING

REAL ASSETS AND THE MODERN INSTITUTIONAL INVESTOR

EXECUTIVE SUMMARY

The 2015 PPI Summer Roundtable, held in San Francisco, California, focused on the role of real assets in the modern institutional investor portfolio. Over two days, the topic generated discussion and exploration on the theme, one that has been growing in importance for many of PPI's members. While some institutional investors have had significant real asset holdings since the 1980s, it has only been the past fifteen years that investors have seen significant expansion beyond real estate. The search for yield in a low interest rate environment, along with the long life and low correlation with other assets all have made it an attractive destination. While many investors at the Summer Roundtable have invested in real assets, the roundtable highlighted the diversity of approaches to this set of investments; from the type of investor, to the governance structure, fund size, available resources and access, PPI's members varied widely in their chosen method of investing.

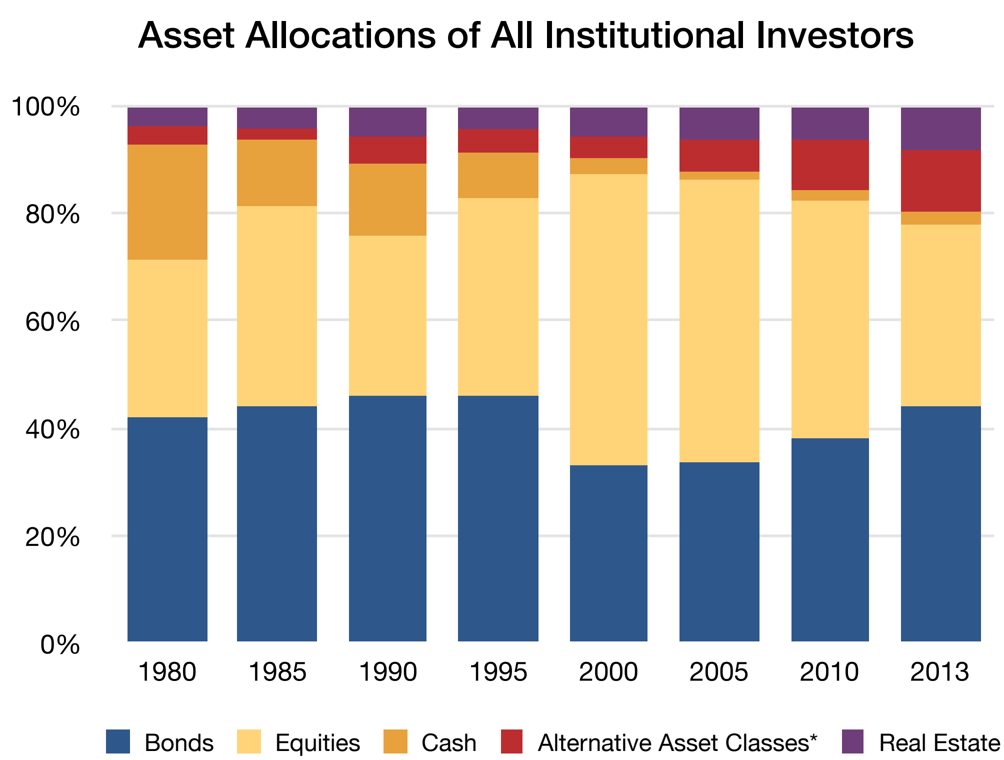
The roundtable included conversations on a wide range of investments in real assets, from broad categories such as real estate and infrastructure to more niche investments such as aircraft leasing and water-related opportunities. The breadth of topics discussed is indicative of the wide range of risk/return characteristics across the group, making real assets as a "class" of assets difficult to define. Despite the ambiguity in defining real assets, the strategic role that they can play was noted by many participants; portfolio diversification, inflation hedging, income yield and return enhancement were all mentioned repeatedly.

In addition to gaining an understanding of the role that real assets are playing, conversations at the roundtable often touched on the various strategies that investors are using to implement and exit a real asset investment. Above all, attaining the right fiduciary culture was inherently important to implement such strategy. One participant mentioned that real assets should be "…looked at as more of a business than an investment…", underlying the need for deep expertise (or access to it) and local knowledge of the asset. This necessity for expertise along with the breadth of investments within real assets, has made benchmarking particularly difficult.

While participants noted a host of challenges and risks associated with real asset investments, long-term drivers support their continued growth as a portfolio mainstay. As investors continue to search for yield, bolstering their holdings in real assets will likely remain the trend.

REAL ASSETS: BROADER, DEEPER AND MAINSTREAM

Institutional investments in real assets have seen a historic rise globally in the last decade and have contributed to significant changes in the composition of institutional portfolios from only twenty years ago. The aggregate asset allocation of all institutional investors shown in the chart below in the mid-1990s would have allocated 50% to equities, 40% to bonds and 5% each to cash and real estate.



*Includes hedge funds, private equity and real estate assets such as timber, oil and gas, agriculture, and infrastructure.

Source: Calculated from data provided by the Federal Reserve Board of Governors, The Conference Board and Pensions & Investments.

Today, institutional portfolios have been allocating more to equities and alternatives, of which real assets comprise a growing share. This trend is exacerbated by current low bond yields and the nature of real assets, which often have a long life span and historically experienced lower correlations with traditional asset classes – both attributes that align well with institutional investor needs.

The 2015 PPI Summer Roundtable sought to provide members a deeper understanding of the outlook for real assets, the opportunities and risks, and the underlying assumptions that institutional investors have when investing in this space. Participants at the roundtable were generally familiar with the diversity of real asset investments and had investment experience in at least one of the underlying asset classes. In a poll conducted during the event, one third of the participants said that they have investments in real estate, 30% are invested in infrastructure, and 21% in agriculture. One fund representative spoke on their recent reallocation of 5% of their fund toward real assets, citing many of the same reasons highlighted throughout the industry: lower volatility, added diversification, and long-term alignment.

Apart from the fact that the majority of members have increased or are looking to increase their real asset investments, the diversity of approaches that they bring to real assets was apparent. There is no "one size fits all" approach, depending on the type of investor, governance structure, resources, size, and access of the fund. Additionally, anchoring decisions around risk was raised repeatedly as a driving determinant for investing in real assets; platform, liquidity, currency, execution, political and regulatory risks all were identified as contributing to the decision of what, when, how and how much to invest in real assets.

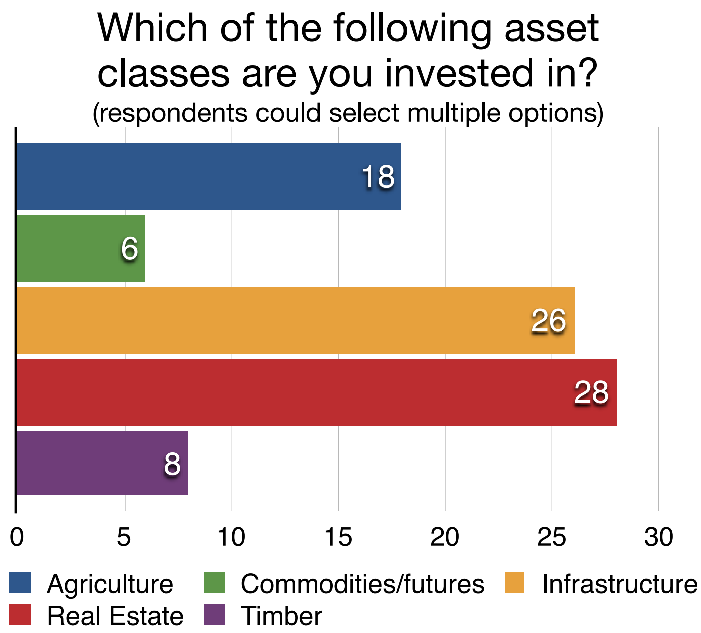
WHAT ARE REAL ASSETS AND WHY ARE THEY IMPORTANT?

Many of the panelists and participants emphasized the importance of not viewing real assets as a singular asset class, given the lack of homogeneity within the grouping. Panelists repeatedly noted the well-known difficulty of making asset allocation decisions based on asset class risk and return assumptions.

From a risk and return perspective, there was no consensus of what constitutes real assets, as their classification within institutional portfolios has broadened over time. However, defining real assets remains a key starting point. Due to the diversity of the underlying assets, a definition of the category would serve as a foundation for investors to better understand what purpose those assets would serve in their portfolios. The strategic roles real assets can serve include portfolio diversification, inflation hedge, income yield, and return enhancement.

Long Term Drivers Are Supporting Real Asset Growth

While there was much discussion of the role of real assets in modern asset allocation strategies, one component that was abundantly clear was their importance. Demographic, developmental and urbanization trends will continue on their current trajectory. These global growth drivers have made real assets an attractive investment for funds looking for diversification; one fund manager went as far as to say that investing in real assets has been "one of the safest bets I have ever made."



INVESTABILITY OF WATER

Apart from a focused dialogue on the topic, water emerged across discussions as an area of concern. Today, water largely remains difficult to access as an investable asset and a very immature asset class despite investment options such as indexes. The lack of any market pricing has made water a difficult asset to invest in, but speakers and participants noted that opportunities are emerging, partially driven by climate change that could make incidents such as California's ongoing draught increasingly commonplace. Water is expected to move from being viewed as a zero cost input to an investable asset over the coming years. Explicitly pricing water will likely be a necessary first step, similar to carbon pricing initiatives that can aid institutional investors to quantify climate risk in their portfolios. For example, investors could prepare to ask large organizations detailed water practice questions.

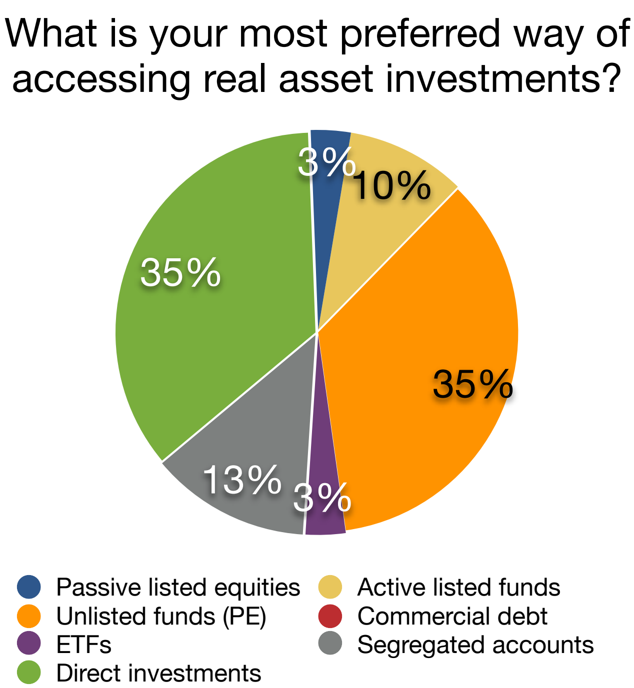
Emerging investable opportunities in water-related investments include waste water treatment facilities and desalinization plants, such as the recently-completed facility in southern California. This is still an immature market, however, but similar to the opportunities in wind power a decade ago, as technologies advance, the expectation is that the cost of water opportunities should decline leading to increasingly more feasible and available water investments of institutional quality.

Agriculture was highlighted as one of the sectors most impacted by water scarcity. Understanding the regulatory risk of these investments should be prioritized, especially as states and nations move toward the explicit pricing of water. This conversation will be pushed to the forefront as long-held land and water rights contracts could see water pricing imposed and highly valued crops to bid up water prices relative to low value crops. As one speaker noted, "…the fact that you have a right to water doesn't mean it's not priced."

WHAT ARE REAL ASSETS AND WHY ARE THEY IMPORTANT? (continued)

These trends transcend all categories within real assets but can be typified through infrastructure needs in emerging economies in the Asia-Pacific region, which was specifically discussed at the roundtable. The infrastructure needs in this region are undeniable, with estimates ranging from half to over one trillion USD needed annually in order to meet the long-term growth requirements of these economies. Particularly in infrastructure, the alignment between long-term investors and institutional investors is apparent; regulatory changes impacting bank lending has drastically culled the ability of international banks — the traditional investors in infrastructure projects — to invest in this space. Pension funds, sovereign wealth funds, endowments and foundations are being called on by international institutions to fill this funding gap.

The roundtable discussion on agriculture highlighted many of the same trends. Despite changing regulatory regimes, the threat of climate change, price volatility and changes in consumer preferences that increase risk in the industry, the long-term growth drivers of agriculture have remained strong and institutional investors have begun to enter. Currently, the market for agriculture investments is rather fragmented, with less than 2% in the United States under institutional management. However, technological gains have the potential to impact the industry; automated machinery and GPS tracking have made new farms highly productive but also created high entrance costs for commercial operations. Several institutional investors expressed increased interest in agriculture, including both upstream and downstream services, even given the initial yields in the low double-digits. Despite short-term fluctuations, or even tail risk concerns arising from climate change or regulatory changes, the long term drivers – population growth, middle-class growth, and changes in diet – remain strong. Additionally, as 80% of farms in the U.S. are still privately owned, coupled with the increasing average age of farmers, opportunities will exist in the future for investors to consolidate.



The Role of Real Assets in the Long-Term Portfolio

A sentiment that was consistently voiced was the need to understand what an investor is asking their real asset component to do for their portfolio. The question, as one participant phrased it, should be, “What [do] you want this asset to do and what risk [do] you want to take?” This highlights a lack of understanding regarding the relationship between expected return and commensurate risk. One example cited is energy infrastructure investing, where returns in any given year can be upwards of 20%. This is typically much higher than its expected return due to the long-term nature of the asset and regulatory constraints. Significantly overshooting expected returns indicates an implicit bet in the investment that could have just as well under-delivered relative to expectations due to the degree of risk exposure embedded. This sentiment was underlined throughout the roundtable; as investors discussed specific investments, benchmarking considerations, and risk profiling, the challenge of defining real assets as a traditional asset class was more than apparent. Grouping real asset investments under one label, with inherent risk assumptions, has proven problematic.

Another good example underscoring the strategic nature of real assets has been the trend in a few defined contribution (DC) plans in the U.S. to include direct real estate (via open-ended co-mingled funds) into target date funds. This is driven by attractive risk-adjusted return expectations. However, outside of real estate, the idea of placing further real asset investments into DC plans was deemed inappropriate by many, citing fee sensitivity and illiquidity among other underlying risk assumptions.

It was clear that the role real assets are playing is quite varied. More established investments, such as private core real estate and timber, are seen as portfolio diversifiers. Broader trends across PPI’s members have seen significant reductions in bonds and indications to reduce hedge fund exposure (traditional areas for diversification) as investors are looking elsewhere. Inflation protection, income/cash yielding investments, and return enhancement were also noted as significant considerations to the decision to invest in this space.

The roundtable also highlighted the fact that all real assets are not equal in their roles. For example, diversification implies lower correlation with equities and fixed income securities to reduce overall portfolio return volatility. Historically, farmland and direct core real estate has fulfilled this role. While diversified commodities have also served this role, its correlation has varied over different market environments, such as in the years leading up to and including the global financial crisis (GFC), when its correlation increased significantly relative to equities.

Certain real asset strategies have a greater capital appreciation component than stable income yield, which change the risk/return dynamics of the investment. Numerous members emphasized the importance of determining the desired risk positioning and return expectations for investing in different real assets. Having the appropriate risk and return goals from the outset is key to managing expectations throughout the real asset investing cycle.

MARKET TIMING: CHINA'S FINANCIAL AND ECONOMIC REFORM

Shanghai Composite Index, July 2014-July 2015

The timing of the Summer Roundtable coincided with a spate of volatility in China's stock markets and government attempts to halt the slide. This became a shared topic of interest for roundtable participants, and concern about the future direction of China's economy has remained on investors' minds since then. Did government attempts to halt the slide indicate a loss of appetite for financial liberalization? Could this have repercussions for the world economy?

In the session on this topic, the panelists described the rise and fall of "Uncle Xi's bull market." It began in the summer of 2014 when easing monetary policy and a slowing housing market generated enthusiasm in the stock market among retail investors. Moreover, the government promoted this rally in order to encourage equity financing. Stock prices were pushed up further as margin investing played a greater role. Margin financing also contributed significantly to the market decline; when the Shanghai Composite dropped by 13.3% between June 15th and 19th, many margin investors got nervous and began selling.[1] This led to further price drops and margin calls, creating a downward spiral. However, rather than allowing the stock market to correct itself, Beijing intervened with numerous measures to prop up prices, from lending money to brokerage firms to threatening to pursue "malicious short-sellers."

Why did the government intervene so forcefully? One speaker stated that in China, not only does the government actively intervene in the market, but people expect it to. Although it is not likely that the stock market decline would have led to a major financial crisis, many individual, first-time investors would have lost a significant portion of their savings. The consequences of major financial losses among numerous retail investors is what the government is most concerned about – social stability.

One attendee asked whether the rapid growth of debt in China meant a future financial crisis was coming. Although local government debt is a concern, the consensus among the speakers was that the central government has the resources to prevent a crisis. However, there is risk of this debt weighing down growth for years. Despite short-term equity volatility, one attendee reminded investors not to lose focus on the big picture. Long-term, the investment outlook for China remains positive: urbanization and an expanding middle class will continue to drive growth for years to come. Equity market volatility has not deterred several PPI members who continue to hold billions of dollars in China A-shares; while the past year has seen tremendous growth in these investments, the recent market downturn has left many concerned. That being said, there was broad agreement amongst roundtable participants that there is still a clear and strong underwriting of China as a long-term investment thesis.

At a keynote plenary, China's "One Belt, One Road" initiative was extensively discussed with the potential to impact the long-term flow of capital. Over several decades, China is expected to help finance infrastructure, resource development, and other projects throughout Asia, Europe and Africa. This will help meet global demand for infrastructure, an issue touched on several times during the roundtable. This initiative will improve trade links within and across regions. It will also provide new markets for Chinese companies. Over the long-term this has the potential to revolutionize economic and political relationships across several continents. Economies will be drawn together with all roads leading to Beijing. However, the "One Belt, One Road" initiative could also be seen as reminiscent of the "lost decade" policies of the Hu Jintao era, where double-digit growth was supported by questionable infrastructure projects that kept China's economy humming even through the depths of the global financial crisis.

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[1] Wildau, Gabriel and Peter Wells, "China shares record worst week in 7 years as rally falters," The Financial Times, 19 June 2015. http://www.ft.com/intl/cms/s/0/132b91bc-162b-11e5-be54-00144feabdc0.html#axzz3j5r7lOB9

GETTING IN AND GETTING OUT – IMPLEMENTATION AND EXIT STRATEGIES

Throughout the Summer Roundtable, questions and comments often noted implementation and exit strategies as the most important consideration. As one asset manager said, "execution is everything", noting the need for a deep understanding of the underlying asset, which often requires specific understanding of an industry outside of the normal proficiency of a portfolio manager. Particularly in private real assets and direct investing, it is not about knowing who to hire but rather the need to understand assets in-house with on-the-ground expertise, transparency and good governance. Separately, how investments are structured and the types of investment vehicles also affect success of execution and outcome. One participant questioned the mismatch between the life of an underlying yield-generating real asset, which can extend beyond 25 years in some cases and the life of a private equity vehicle in which many of these assets are offered, often only 10-15 years.

At its heart, investing in real assets requires the right fiduciary culture in order to properly execute. Belief in non-executive directors and chairpersons are fundamentally important in the due diligence and approval process. This requires objectivity to underwrite each asset and deal, without the vested interest of a board member or investment officer. This culture is also highly important when managing real asset investments; those with deep experience often look at their holdings as more of a business than an investment and will often seek outside expertise. This mentality represents a significant departure from traditional asset management for many investors.

Implementation and exit strategies ultimately depend on the market conditions of the asset. This point was reinforced throughout the roundtable, as investors noted the growing international portfolios of Asian sovereign wealth funds that chiefly look to developed markets to bolster their real asset holdings. These large pools of assets are increasingly going beyond the confines of their home market and venturing into real assets – beginning with real estate – in Europe, the United Kingdom, Canada, the United States and Japan. There has been a marked increase in competition for deals in these markets, which can be linked to the divergence in investor objectives. While many investors from Canada and Europe that have robust real asset portfolios often look for significant risk-adjusted returns, new entrants into the space often are looking to hedge exposure to local currency and inflation, depressing yields in first-tier cities. As Asia funds continue to build their international exposure, this trend will most likely only continue.

The challenges of benchmarking real assets came up at the roundtable specifically with regard to private investing in areas lacking well-established proxies such as in private infrastructure and farmland. The benchmarks that are currently available exhibit biases that investors need to be aware of when using. Selecting an internal hurdle rate, such as an absolute number, inflation plus number or public equity plus premium, can be helpful to evaluate the success of the investment on its own but may be much less meaningful to assess the relative value the investments in a total portfolio context. However, grouping private real assets with private equity investments also makes little sense and risk orphaning those assets. Specific to infrastructure, the difficulty of benchmarking traces back to investors who do not view infrastructure in the same way. While peer group comparison can be utilized, given the diversity of the underlying investments, broad definition along with fundamental specificity are needed in addition, such as infrastructure characteristics, expected cash flow profile and risk and return expectations for various sub-sectors.

CHALLENGES AND RISKS

Throughout the roundtable discussions, participants echoed the importance of carefully evaluating different types of risks throughout the real assets investing cycle. These can be categorized as investment-related and non-investment risks:

Investment Risks	Non-Investment Risks
Execution	Technology
Liquidity	Expertise
Lifecycle	Information Asymmetry
Competition	Regulatory
Governance	Political
	Counterparty

Execution risk, in many ways, is informed by all of the risks cited below, which can impact the long-term success of any real asset investment program, based on whether and how these risks were incorporated into the pricing of underlying real asset investments. Additional key risks that were touched on at the roundtable include:

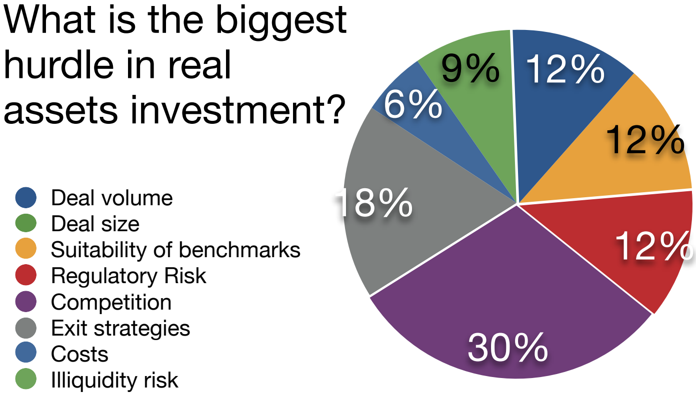
Liquidity

Given that many real asset investments are infrequently and privately traded, and lack pricing transparency, liquidity risk remains a key concern particularly when the investment horizon of these assets are often longer than a decade. Large capital commitments once made can be challenging to unwind and increases overall risk of these investments. At the same time, institutional investors with long-term horizons can see potential benefit in market illiquidity that provides entrance barriers for short-term players and speculators that would otherwise increase volatility in those asset classes.

Regulatory and Political Risks

Real assets are characterized by a high degree of political involvement and often operate in a highly regulated environment. During the roundtable, participants often highlighted the risk of exposure to certain regulatory environments. As suggested during the roundtable, it is beneficial to establish relationships with government authorities in order to not only guide them through the process and help adopt business friendly practices, but also to better understand government sensitivity and involvement. Regulatory and political risks are hard to quantify and usually do not follow historical patterns. They often serve as a barrier to entry and therefore significant due diligence is important to determine if a particular investment has a long-term benefit, should be postponed or let go.

What is the biggest hurdle in real assets investment?



Expertise

Being an institutional investor, it is often challenging to invest in a private opportunity if it lies outside of a core expertise. During the roundtable, participants and speakers stressed the significance of having the right tools and expertise on the overall success of an investment. The right set of skills is essential for private investment in real assets. Expertise plays the role of a filter to help allocate capital to the best projects. Without the right expertise to understand all aspects of an investment, investors are exposed to a great deal of uncertainty and potentially increase the likelihood of left-tail event occurrences.

Information Asymmetry

Information today plays a pivotal role in any decision-making process. Large capital investments that are common to real assets are based on precise due diligence and valuations that rely on available information. Data on emerging markets has been questioned for its consistency, lack of duration, and lack of availability. As a result, information asymmetry becomes a silent risk that can put long-term investors on edge. According to the UBS Global Infrastructure & Utilities 50-50 Index, the best performing region in Q1 2015 was Asia as a result of strong listed infrastructure returns in Japan and China, followed by Europe and South America. It is important to highlight that there are numerous projects, predominantly among emerging market economies, that have not been recorded, making it difficult to assess the real state of a certain region. During one of the sessions, a speaker highlighted the importance of working with consultants in the countries where data is not reliable or not steadily available. Working with government authorities on getting needed information could be one approach towards receiving better data.

Counterparty/Operational Risk

Investing directly in real assets involves major risks; since institutional investors' core expertise might not be readily available in the region, many projects involve local counterparties that either operate or manage projects. The ability to find experts to manage the operational side of an investment helps to achieve consistent returns. It is often a challenging task to find local expertise, and numerous discussions were held during the roundtable on finding companies with the right fit. As a result, it is important to have a 360-degree methodology in mind when approaching valuations in real assets. A good way to mitigate some of the risk could be to structure "club" deals that involve similar-minded institutional investors.

Governance

Roundtable participants repeatedly noted the importance of focusing on governance structures to simplify fiduciary issues. For many of the larger funds that have sophisticated real asset portfolios, using a robust internal team to dig deeply into the assets was noted as of central importance. These funds look at their real asset investments, particularly in infrastructure, as more of a business than an exposure to an asset class. Direct investors facing concentration risk and liquidity risk, must ask themselves whether the existing governance structure in place supports the long-term success of their direct investing program and what governance gaps may be present that can negatively impact the progress of those investments over time.

FOOD FOR THOUGHT

Given the nature of real assets, governments are often involved at some stage. One speaker encouraged asset owners to be creative and proactive in finding solutions for problems, as opposed to waiting for governments to do so. Many investors are already doing just that, looking for creative ways to partner with like-minded investors and city and national governments. As investors continue to face tough competition for accessing deals, they will need to continue to think creatively for ways to access investments.

PPI has held educational forums for over two decades that inform the investment decisions of the world's major institutional investors as they relate to Asia, the Pacific Rim, and the world. These forums, exclusively for members, are conducted in a collegial, trusted and marketing-free environment, which allows in-depth and off-the-record dialogue. This tradition of thought leadership and candid conversation are coveted aspects of the PPI experience.

UPCOMING ROUNDTABLES

Asia Roundtable in Tokyo • October 28-30, 2016

Winter Roundtable in Los Angeles, CA • February 24-26, 2016

Summer Roundtable in Cambridge, MA • July 27-29, 2016

PPI Executive Seminar in Hong Kong • October 23-25, 2016

Asia Roundtable in Hong Kong • October 26-28, 2016

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