A BRIDGE TO SOMEWHERE

SOVEREIGN AND PENSION CONSORTIA AS ACCESS TO INFRASTRUCTURE INVESTMENTS

Wafra Investment Advisory Group, Inc.
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A BRIDGE TO SOMEWHERE
Sovereign and Pension Consortia as Access to Infrastructure Investments

INTRODUCTION

> The world has an infrastructure problem. Historically supported by public funds, infrastructure development began to need private investment due to decreases in public spending in the 1970s and 1980s. The global financial crisis in 2008 decimated government budgets in both emerging and developed markets, which exacerbated the disparity between the need for infrastructure and the supply of capital to fulfill that need.
> In its oft-cited 2013 report, McKinsey estimated that $57 trillion in global infrastructure investment is needed by 2030. To give an idea of the enormous quantum of capital needed to meet such a demand, the IMF estimates the total wealth held by institutional investors (including pension funds, insurance companies, mutual funds, and sovereign wealth funds ("SWFs")) to be about $100 trillion. Experts predict that government budgets will, at most, be able to fund half of these infrastructure investments, leaving an “infrastructure gap” as large as $20-30 trillion.*

Estimates of needed infrastructure investments, 2013-30

$ trillion, constant 2010 dollars

Projection based on historical spending

Projection based on ratio of infrastructure stock to GDP

Projection based on external estimates

Source: Organisation for Economics Co-operation and Development (OECD), International Energy Agency (IEA), 2012; International Transport Forum (ITF); Global Water Intelligence (GWI); McKinsey Global Institute analysis

> **Though the gap in infrastructure** investment will likely continue to plague both emerging and developed economies, it represents a promising and lucrative opportunity for investors capable of dealing with the unique profile of infrastructure investments. Over all, public infrastructure has outperformed equities over the past 15 years, while also boasting a lower standard deviation.

> **Sovereign wealth and pension funds** are uniquely-placed investors to take advantage of this opportunity. However, SWF investments in infrastructure remain low — generally between 0-5% — while allocations to other asset classes currently suffering from lower yield and higher volatility, like equities, are often vastly over-represented due to lower barriers of entry.

> **In a current market characterized** by low yield and high volatility, we believe that SWFs and endowments should expand their infrastructure allocations and leverage SWF consortia to overcome the challenges to investment in infrastructure.
Traditionally, infrastructure has played a highly specific role in investment portfolios, generally as a long-term, illiquid diversifier that can absorb sizable capital allocations. Few investors fully appreciate the diversity of this asset class, with volatility and returns differing substantially based on subsector, geography and investment vehicle.
The Hidden Diversity of Infrastructure

Infrastructure generally comprises 16 subsectors (as seen in the table above), each of which has a distinct investment profile. For example, brownfield toll roads generally average gross returns of 8-12% mostly from cash yield rather than capital appreciation, while broadcast networks can generate gross returns of 15-20% due in large part to capital appreciation. Risk and return profile vary further, depending on whether the project is brownfield or greenfield.

In addition to the large variety of infrastructure subsectors, there are several investment vehicles investors can use to access infrastructure assets. On the equity side, investors can make direct or indirect investments in listed or unlisted vehicles. If an investor prefers debt financing, capital markets and private debt vehicles comprise a number of direct and indirect investment vehicles.
Even within these investment vehicles, there is substantial variance in return assumptions and risks, depending on the investment strategy and position in the capital structure.
The Hidden Diversity of Infrastructure

VARIANCE IN INFRASTRUCTURE RETURNS

Infrastructure Strategies: Key Characteristics

<table>
<thead>
<tr>
<th></th>
<th>Investment Grade Debt</th>
<th>Junior Debt</th>
<th>Core Equity</th>
<th>Core + Equity</th>
<th>Value-Added Equity</th>
<th>Opportunistic Equity</th>
</tr>
</thead>
<tbody>
<tr>
<td>RETURN ASSUMPTIONS 1</td>
<td>3.5 - 5.5%</td>
<td>5.5 - 9%</td>
<td>5 - 9%</td>
<td>8 - 12%</td>
<td>11 - 15%</td>
<td>15 - 17%</td>
</tr>
<tr>
<td>KEY RISKS</td>
<td>Operating Assump-</td>
<td>Market Risk,</td>
<td>Operating Assump-</td>
<td>Construction</td>
<td>Strategy Implementation</td>
<td>Market Risk, Politi-</td>
</tr>
<tr>
<td></td>
<td>tions, investment</td>
<td>tions, Levy-</td>
<td>tions, Leve-</td>
<td></td>
<td></td>
<td>cal Risk and Cur-</td>
</tr>
<tr>
<td></td>
<td>Structure</td>
<td>ely Levels,</td>
<td>ely Levels, Re-</td>
<td></td>
<td></td>
<td>rently Risk</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Regulatory</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>REVENUE CERTAINLY</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>In Some Cases</td>
</tr>
<tr>
<td>(CONTRACTED)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ALREADY REVENUE</td>
<td>N/A</td>
<td>N/A</td>
<td>Yes</td>
<td>No</td>
<td>In Some Cases</td>
<td>In Some Cases</td>
</tr>
<tr>
<td>GENERATING?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MAIN RETURN DRIVER</td>
<td>Income</td>
<td>Income and</td>
<td>Income</td>
<td>Income and</td>
<td>Appreciation</td>
<td>Appreciation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Appreciation</td>
<td></td>
<td>Appreciation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GDP SENSITIVITY</td>
<td>Low</td>
<td>High</td>
<td>Low</td>
<td>High</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>GREENFIELD OR BROWNFIELD</td>
<td>Both</td>
<td>Both</td>
<td>Brownfield</td>
<td>“Dark Green”</td>
<td>Both</td>
<td>Both</td>
</tr>
<tr>
<td>DEVELOPMENT RISK</td>
<td>In Some Cases</td>
<td>In Some Cases</td>
<td>No</td>
<td>No</td>
<td>In Some Cases</td>
<td>In Some Cases</td>
</tr>
<tr>
<td>RETURN DRIVEN BY EXIT?</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>OPERATING COMPLEXITY</td>
<td>Low</td>
<td>Low</td>
<td>Medium</td>
<td>Medium</td>
<td>High</td>
<td>Medium/High</td>
</tr>
</tbody>
</table>

Source: BlackRock, February 2015.

1 These ranges are BlackRock's return assumptions for infrastructure assets. BlackRock has arrived at these long-term, project-level return assumptions by applying the cost of capital and a discounted cash flow methodology, taking into account anticipated revenues and operational factors, to projects currently available in the market. The upper end of each targeted return range assumes the use of leverage and/or manager skill. The estimates are as of March 2015, may change as subsequent conditions vary and are presented for informational purposes only. No guarantee is made regarding the ability of investors to obtain returns within these ranges, either now or in the future.

> Given the wide variety of subsectors, investment vehicles and risk profiles, infrastructure allows for a flexible investment approach depending on an investor’s needs.
The Hidden Diversity of Infrastructure

GEOGRAPHY

> Adding to the diversity within the infrastructure sector, geography plays a critical role in the investment profile of a potential project. Emerging markets infrastructure investments typically generate higher yields than developed market infrastructure investments, while also showing greater volatility in returns. The higher risk profile in emerging markets is primarily due to less developed regulatory and political structures, which can complicate and slow the progress of a project. Government agencies may need to enact or modify regulations before construction proceeds, and new, haphazard rules could jeopardize the legality of construction underway. Further, emerging markets primarily need greenfield projects, which are inherently riskier than the brownfield projects undertaken in developed markets.*

*Source: Dow Jones Brookfield Infrastructure, Dow Jones Global Select Dividend Indexes Presentation, Deborah Ciervo, March 1 2011.
Annual infrastructure needs, and the projects they entail, vary greatly across geographies, with stark differences between emerging and developed markets. Emerging markets have a greater need for greenfield projects in the energy sector, for example, while developed markets — or countries in the OECD — have a stronger need for brownfield road/transport projects (see Breakdown of Infrastructure Needs chart on page 21).

As mentioned above, the different subsectors entail substantially different expectations for yield, risk and capital improvements, and the variance in market and political maturity adds an additional factor in the diversity of infrastructure options available to SWFs.

Comparative Risk of Infrastructure

Source: Deutsche Asset & Wealth Management, January 2015
The current market climate has investors across the globe desperately searching for yield. The lagging global economy has pushed central banks to pursue unconventional monetary policy, with historically low — or even negative — interest rates in many markets. Such policies, combined with economic malaise in China and high volatility in emerging markets and in the commodities sector, have led to the recent anemic performance of equities, bonds and hedge funds. Equities, in particular, have suffered, with the MSCI World Index posting returns of 0.74% with a standard deviation of 36.23% from 2015 through mid-2016, which compare to its annualized 10-year returns of 5.02% with a standard deviation of 16.51%.

Many SWFs, with large equities and fixed-income allocations, performed poorly in 2015. For example, Norway’s sovereign wealth fund (“Norges”) has an approximate 60% allocation to equities and 37% allocation to fixed income. Not only did Norges’ 2015 performance suffer, with equities returning 3.8% and fixed income returning 0.3%, but it also experienced extreme volatility over the course of 2015, posting a 4.9% overall loss (equivalent to $31 billion) in the third quarter alone, driven by an 8.6% loss in equities.

OPPORTUNITY

FINDING ALPHA IN INFRASTRUCTURE
Average asset allocation of Large Pension Funds (LPFs) and Public Pension Reserve Funds (PPRFs), 2013 (1,2) *

> Many pensions also have asset allocations that are heavily dependent on equities and fixed income (e.g. the average European pension has more than 80% of its asset allocation in equities and fixed income), and anemic yield combined with high volatility may signal that a change in asset allocation is necessary.

> As interest rates remain at historic lows, returns for equities and fixed-income assets may continue to lag, and, if so, SWFs would need to pursue one of two courses of action in order to achieve target returns: (1) increase allocations to riskier assets within currently-held asset classes; or (2) change their asset allocations in search of yield in other asset classes while balancing risk.

Note: (1) The value is a simple average of the share invested in unlisted infrastructure investments for all LPFs (respectively PPRFs) for which actual asset allocation was available in 2013, independently of their size in terms of assets. Totals may not add to 100% due to rounding (2). Both OMERS and FUNCEF changed the way that their asset allocation is reported compared to previous years. OMERS moved to a factor-based asset allocation approach and reported traditional investments such as stocks and bonds in the “other” category. FUNCEF reported fixed income in the “other” category compared to previous years.

* 75 retirement schemes comprise the section on LPFs, consisting of a mix of defined benefit (DB) and defined contribution (DC) pension plans (mainly public sector funds, but also corporate funds) that together total USD 3.9 trillion. Data for 50 schemes were provided by the large pension funds directly, the other 25 coming from publicly available sources. This information is presented in combination with the PPRF survey carried out at the same time. 21 PPRFs or Sovereign Wealth Funds with a pension focus completed the survey; 8 were added from publicly available sources.
Opportunity

SWFS AND INFRASTRUCTURE AS AN ASSET CLASS: A MATCH CONSTRUCTED IN HEAVEN

> We believe SWFs should increase their infrastructure allocations both to combat the current market environment and take advantage of the particularities of infrastructure investments, which often serve as a limitations for many other types of investors but are beneficial to SWFs.
Public infrastructure* has consistently outperformed equities on a global level, with average annual returns of 12.11%, compared with the MSCI World Equity Index rate of 8.65% from 2003-2015 (Bloomberg).

Infrastructure is generally a stable, low-beta diversifier that hedges against inflation.

SWFs are part of a small class of investors who have long time horizons and can profit from the illiquidity premium inherent in infrastructure investing.

SWFs have significant amounts of capital to deploy, and emerging SWF consortia can increase the magnitude of potential investments.

Many institutions have policies forbidding the direct investment in infrastructure. However, there are over a dozen different investment vehicle options for infrastructure investments, allowing flexible access to the underlying asset class.

The rise of SWF consortia allows less experienced SWFs to leverage the expertise of other, more experienced institutional infrastructure investors. Host governments often offer public guarantees against a certain level of risk in infrastructure project, and government-related investors like SWFs are well-placed to negotiate such guarantees.

*As measured by the Dow Jones Brookfield Global Infrastructure Index.

Past performance is not an indication of future performance.
Public infrastructure investments consistently outperformed equities from 2000-2015 — both globally and in emerging markets — by a substantial margin, while also boasting lower volatility. During this period, there has also been a steady increase in infrastructure allocations among SWFs; however, this has been counteracted by a decrease in bank financing for long-term investments due to a systematic de-risking after the Global Financial Crisis in 2008. There are relatively few investors in infrastructure, which creates a capital shortfall that may benefit investors like SWFs, who are capable and willing to invest.

Dow Jones Brookfield Global Infrastructure Index vs. MSCI World Equity Index

<table>
<thead>
<tr>
<th></th>
<th>DJ Brookfield Global Infra.</th>
<th>MSCI World</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRICE CHANGE</td>
<td>342.4 %</td>
<td>109.9 %</td>
</tr>
<tr>
<td>TOTAL RETURN</td>
<td>342.4 %</td>
<td>194.4 %</td>
</tr>
<tr>
<td>DIFFERENCE</td>
<td>148.0 %</td>
<td>8.65 %</td>
</tr>
<tr>
<td>ANNUAL EQ.</td>
<td>12.11 %</td>
<td>8.65 %</td>
</tr>
</tbody>
</table>

From 2003-2015

Dow Jones Brookfield Emerging Markets Infrastructure Index vs. MSCI EM Equity Index

<table>
<thead>
<tr>
<th></th>
<th>DJ Brookfield EM Infra.</th>
<th>MSCI EM Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRICE CHANGE</td>
<td>416.7 %</td>
<td>171.9 %</td>
</tr>
<tr>
<td>TOTAL RETURN</td>
<td>416.7 %</td>
<td>286.7 %</td>
</tr>
<tr>
<td>DIFFERENCE</td>
<td>130.0 %</td>
<td>11.0 %</td>
</tr>
<tr>
<td>ANNUAL EQ.</td>
<td>13.5 %</td>
<td>11.0 %</td>
</tr>
</tbody>
</table>

From 2003-2015
> **Infrastructure investments can also allow** for a significant amount of capital to be deployed to a stable asset likely to generate reliable returns with an illiquidity premium. SWFs are uniquely placed to capture the illiquidity premium, as they can tolerate (and may prefer) large investments and long time horizons.

> **In addition to the clear** economic advantages of investing in infrastructure, SWFs may also foster political and diplomatic goodwill by facilitating another country’s development. SWFs are public bodies that, to a certain extent, represent the will of their respective governments. Such diplomatic goodwill may manifest in the form of public investment guarantees for the projects the SWF has financed, or in a general deepening of bilateral relations.

> **SWFs need a new strategy** to combat a volatile, low-yield market, and investments in infrastructure can represent a valuable source of yield with a profile that matches SWF goals.
MAJOR CHALLENGES

> **Though there are many** risks inherent in complex infrastructure investments, perhaps the most difficult challenges are in sourcing, evaluating and developing quality deals. These challenges are two-pronged and involve (1) a bottleneck in the infrastructure pipeline; and (2) many investors’ lack of technical expertise.

> **Despite a growing demand for** investment in infrastructure, paradoxically, the bottleneck in the infrastructure pipeline limits the number of projects available for investment. Infrastructure investments — in particular greenfield projects — often entail complex structures that involve a large number of parties and require significant legal and financial expertise. Unless there is a steady stream of projects in which investors can consistently use such costly expertise and deal frameworks, investors may consider such projects too risky, expensive or time-consuming to pursue.

> **In addition, many infrastructure projects** are in jurisdictions without a coherent or established legal/regulatory regime to support the development of such infrastructure investments.

> **Political risk is a major** concern in infrastructure investments — which generally serve as public goods — and fear of unforeseen regulatory burdens, failure to uphold contractual terms, and even expropriation further diminishes the pipeline of acceptable infrastructure investments.

> **First-time SWF investors in** infrastructure may also lack the technical expertise to truly analyze potential investments, forcing them into a cycle in which they cannot access infrastructure as an asset class due to lack of prior experience. This risk extends past the initial investment analysis phase and into project development and maintenance.
OVERCOMING INFRASTRUCTURE CHALLENGES: SWF CONSORTIA AS ACTIVE INVESTORS

> **SWFs can overcome many** of the challenges present in infrastructure investments by joining SWF consortia: teams of SWF investors that directly source deals and structure them as co-investments.

> **SWF consortia allow first-time** infrastructure investors to leverage the experience and expertise of other SWFs or sovereign development funds, overcoming an initial barrier to entry to the asset class. With even a slight gain in experience in infrastructure, SWF investors may feel more confident seeking indirect investment vehicles to gain access to the underlying infrastructure asset. Many SWFs may not have the technical expertise for direct investment in the asset, but they can certainly evaluate the profile of equities or bonds that have infrastructure as an underlying asset. Public equities infrastructure has consistently outperformed equities markets over the past decade and can diversify SWF portfolios without requiring deep technical expertise.
Overcoming Infrastructure Challenges

> **Further, a consortium of** several sizable SWFs will be able to generate stronger deal flow than a single investor, with diverse regional knowledge and networks playing a significant role in identifying investment opportunities. Pooling capital in ongoing consortia can also reduce the concentration risk inherent in large infrastructure investments, giving SWFs the opportunity for a broader, more diverse infrastructure portfolio.

> **The unique position of** SWFs as semi-governmental entities may also provide a legitimacy and negotiating power with local governments. The presence of high profile, semi-public investors could increase pressure on local governments to provide stable development conditions, resulting in increased project efficiency and lower risk.

> **SWF consortia are quickly becoming** major players in the infrastructure sector. A SWF consortium, comprising Ontario Teachers’ Pension Plan, Kuwait Investment Authority and Japanese pensions, among others, recently purchased the London City Airport for $2.8 billion and is considering purchasing a majority stake in the British National Grid’s gas distribution arm. In 2013, the New Zealand Superannuation Fund founded the Innovation Alliance, an ongoing SWF consortium with other partners including the Alberta Investment Management Corporation and the Abu Dhabi Investment Authority, to invest in infrastructure assets.

> **Such consortia are part of** a larger trend of co-investment and directly-sourced deals among SWFs, who share interest in low-volatility, long-term assets. Even outside the infrastructure sector, SWF consortia can reduce or eliminate fees paid to asset managers, enhance deal flow and allow access to strategic investments and partnerships.
Overcoming Infrastructure Challenges

PROACTIVE SWF CONSORTIA IN INFRASTRUCTURE: THE CHINESE MODEL

> Though a consortium structure’s potential enhanced deal-sourcing capability could help to mitigate infrastructure’s pipeline challenge, it would not eliminate the bottleneck in the infrastructure pipeline, which is due to expensive and complicated legal and financial frameworks needed across markets. Traditionally, SWFs have only approached infrastructure projects after they have been developed ad hoc by third-party private investors. In contrast, proactive SWF consortia with regional expertise could identify areas where infrastructure investment is necessary, proposing the project itself to local governments. This is bolstered by the fact that certain geographies and groups of countries have a greater need of a particular type of asset than others (for example, according to the OECD and BCG, India needs $1.9 trillion in clean water infrastructure alone).

Breakdown of Infrastructure Needs

**Type of investment, by industry (%)**

<table>
<thead>
<tr>
<th>Type of Investment</th>
<th>Countries other than India, China, and OECD</th>
<th>India</th>
<th>China</th>
<th>OECD except for the United States</th>
<th>United States</th>
<th>All non-OECD</th>
<th>All OECD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Airports and ports</td>
<td>0.7%</td>
<td>0.2%</td>
<td>0.4%</td>
<td>0.1%</td>
<td>0.2%</td>
<td>0.3%</td>
<td>0.2%</td>
</tr>
<tr>
<td>Rail</td>
<td>1.3%</td>
<td>0.2%</td>
<td>0.1%</td>
<td>0.1%</td>
<td>0.2%</td>
<td>0.1%</td>
<td>0.1%</td>
</tr>
<tr>
<td>Electricity</td>
<td>4.5%</td>
<td>1.0%</td>
<td>1.6%</td>
<td>0.4%</td>
<td>0.6%</td>
<td>0.2%</td>
<td>0.2%</td>
</tr>
<tr>
<td>Roads</td>
<td>5.8%</td>
<td>0.7%</td>
<td>0.4%</td>
<td>0.2%</td>
<td>0.2%</td>
<td>0.6%</td>
<td>0.2%</td>
</tr>
<tr>
<td>Water</td>
<td>16.0%</td>
<td>0.8%</td>
<td>2.9%</td>
<td>0.4%</td>
<td>0.2%</td>
<td>0.2%</td>
<td>0.2%</td>
</tr>
<tr>
<td>Telecommunications</td>
<td>10.3%</td>
<td>4.5%</td>
<td>1.9%</td>
<td>4.5%</td>
<td>5.8%</td>
<td>4.9%</td>
<td>5.4%</td>
</tr>
</tbody>
</table>

**Regional investment, by type (%)**

<table>
<thead>
<tr>
<th>Region</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Countries other than India, China, and OECD</td>
<td>5.4%</td>
</tr>
<tr>
<td>India</td>
<td>4.9%</td>
</tr>
<tr>
<td>China</td>
<td>4.5%</td>
</tr>
<tr>
<td>OECD except for the United States</td>
<td>1.9%</td>
</tr>
<tr>
<td>United States</td>
<td>1.3%</td>
</tr>
<tr>
<td>All non-OECD</td>
<td>1.2%</td>
</tr>
<tr>
<td>All OECD</td>
<td>1.0%</td>
</tr>
</tbody>
</table>

Sources: Organisation for Economic Co-operation and Development (OECD); BCG analysis.

1 The data for water to the world mapped by OECD (all OECD countries, as well as Brazil, China, India, and Russia).
Overcoming Infrastructure Challenges

The "Chinese model" of infrastructure investment in sub-Saharan Africa serves as a valuable model for how SWF consortia could proactively seek infrastructure investments. To alleviate expertise and cost problems, various types of infrastructure assets, Chinese investors have primarily focused on two types of assets that are in extremely high demand: hydropower generation and railways. This allows the Chinese team to develop a scalable expertise and deal structure without having to work through new technical complications on each investment. Further, the Chinese have allocated 70% of their infrastructure capital to just four jurisdictions in Africa, which can mitigate political risk and regulatory uncertainty, while lowering costs. In short, the Chinese financiers’ focus on specific types of infrastructure assets in a limited number of jurisdictions allowed them to develop a cost-effective infrastructure pipeline.
> **Chinese investments in African infrastructure** generally take the form of loans for which Chinese lenders charge sub-market rates (about 3.6% over a 12-year period), in exchange for various natural resource rights. Chinese investors have also cultivated good relationships with African leadership due to an apolitical stance in regards to domestic affairs and potential instances of “pay-to-play” activity. These positive relationships have reaped political and diplomatic dividends, no doubt loosening regulatory barriers, while deepening economic ties between China and countries across sub-Saharan Africa.

> Despite this, parts of the Chinese model have sparked some controversy, including the exclusive use of Chinese construction firms and personnel, as well as questionable quality control. Some critics point to the power imbalance in negotiations for large projects, decrying a dynamic where the Chinese benefit more than the host nation. Generally, however, parties seem content with the overall Chinese influence on infrastructure in Africa.

> The extent to which SWF consortia could use the Chinese model of infrastructure investment is unclear. The ability of a SWF consortium to specialize in certain sectors and jurisdictions could ease the process of infrastructure investment, as well as lower risks and costs. Further, SWF consortia would most likely depart from the contentious Chinese strategy of importing labor, opting instead for local labor and further benefitting the local economy and enhancing the value for local leaders.

> Sovereign consortia may not be able to fully replicate the Chinese model, however, as it functions on the combination of below-market rates and mineral and natural resource rights, in order to enhance the value proposition. Depending on the asset type, SWF consortia may need to engage in similarly creative deal structures to achieve sufficient returns in emerging markets investments.
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RICHARD SAFRANEK
Executive Vice President of Wafra

Richard Safranek is an Executive Vice President of Wafra and Head of the Executive Advisory & Research Division. Prior to joining the Executive Advisory and Research division, Mr. Safranek served as a portfolio manager within Wafra’s Securities Division where he covered equity markets in the Asia-Pacific and Emerging Markets regions. Before joining Wafra in 1995, Mr. Safranek served as an investment analyst at World-Wide Investment Co., Ltd., a Hong Kong-based family office. Mr. Safranek has an MBA from Columbia University, a B.A. in International Relations from Johns Hopkins University, and completed a Chinese language program at the Beijing Foreign Language Institute.

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Managing Director

Daniel Adamson is a Managing Director in Wafra’s Executive Advisory and Research Division. He is primarily focused on developing financial and strategic solutions for sovereign investors and pension funds. Previously, Mr. Adamson held senior positions at Ares Management and Bridgewater Associates. He began his career at McKinsey & Company. Mr. Adamson earned a B.A. summa cum laude from Yale University, an M. Phil. in Politics from Oxford University, where he was a Marshall Scholar, and a J.D. from the Yale Law School.
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Martin Lujan is an Associate in Wafra’s Executive Research & Advisory Division, where he specializes on research, business development and investment opportunities across functional areas. Prior to Wafra, Mr. Lujan worked at Barclays PLC in Equities Trading, and in the investment management divisions of Goldman Sachs and GMO LLC. Most recently, Mr. Lujan worked as a Research Analyst at Pinnacle Asset Management, a commodities fund manager. Mr. Lujan holds an MBA from the MIT Sloan School of Management, and a B.A., magna cum laude, in Finance and Economics from the University of New Mexico.

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