Welcome

Infrastructure Investment Roundtable

WEDNESDAY, MAY 2, 2018

Inn at Penn

3600 Sansom Street

Philadelphia, PA 19104

(Woodlands A&B Meeting Rooms)



ALTERNATIVE INVESTMENTS Initiative

Agenda

8:30 - 9:00	BREAKFAST
9:00 - 9:15	WELCOME Sarah Hammer, Senior Director, Wharton Alternative Investments Initiative, and Adjunct Professor of Law, University of Pennsylvania Law School
9:15 - 9:30	ADDRESS BY THE DEAN Geoffrey Garrett, Dean of The Wharton School and Reliance Professor of Management and Private Enterprise
9:30 - 10:00	KEYNOTE Glenn Youngkin, Co-CEO, The Carlyle Group
10:00 - 10:30	SESSION 1: THE MACROECONOMIC ENVIRONMENT FOR INFRASTRUCTURE INVESTMENT Daniel Hardy, Division Chief, Debt and Capital Markets, The International Monetary Fund Hans Peter Lankes, Vice President, Economics and Private Sector Development, The International Finance Corporation
10:30 - 11:15	SESSION 2: DEAL STRUCTURES Eli Gross, Managing Director, Investment Banking, Morgan Stanley Recep Kendircioglu, Senior Managing Director, Bond and Corporate Finance Group, and Head of Infrastructure Investing, John Hancock Andrew Marino, Co-Head, Carlyle Infrastructure Opportunity Fund Emmett McCann, Managing Director and Co-Portfolio Manager of Infrastructure Investing, Oaktree Capital

11:15 - 11:30	BREAK
11:30 - 12:00	SESSION 3:
	PUBLIC POLICY, REGULATION AND THE TA
	Kevin Chavers, Managing Director and Member of Global Public Policy Steering Committee, BlackRock
	Stacey Dion, Managing Director, External Affairs, Carlyle
	Aaron Klein, Director of the Center on Regulation a Markets and Fellow in Economic Studies, The Brookings Institution
	Chris Mann, Partner and Head of the Global Infrastructure Practice, Sullivan Cromwell
12:00 - 12:30	SESSION 4:
	THE IMPACT OF BLOCKCHAIN TECHNOLOG ON FINANCIAL INFRASTRUCTURE
	Emil Woods Co-Founder, Cedar Hill Capital, and Co-Founder, Liberty City Ventures
12:30 - 1:30	LUNCH AND REMARKS BY THE ALTERNATI
	Sarah Hammer, Senior Director, Wharton Alternati Investments Initiative, and Adjunct Professor of Law University of Pennsylvania Law School

1.30 - 2.00 3E33ION 3 .	1:30 - 2:00	SESSION 5:
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CASE STUDY: PUERTO RICO

Rahman D'Argenio, Partner, Energy Capital Partners, and Board Member, Sunnova Solar Energy

Aaron Klein, Director of the Center on Regulation and Markets and Fellow in Economic Studies, The Brookings Institution

Emmett McCann, Managing Director and Co-Portfolio Manager of Infrastructure Investing, Oaktree Capital

David Skeel, S. Samuel Arsht Professor of Corporate Law at the University of Pennsylvania Law School and Member of the Puerto Rico Oversight Board

2:00 - 2:30 **SESSION 6:**

THE BROADBAND

Patrick Hendy, Partner, Columbia Capital

Trent Vichie, Co-Founder and Co-CEO, Stone Peak Investment Partners

David Wassong, WG '97

BREAK

2:30 - 2:45

2:45 - 3:15 **SESSION 7:**

OPERATIONAL VALUE ADD IN INFRASTRUCTURE

Markus Hottenrott, Chief Investment Officer, Morgan Stanley Infrastructure Partners

3:15 - 3:45	SESSION 8: FIRESIDE CHAT ON INNOVATION IN INFRASTRUCTURE
	Brian Barlow, Director of Infrastructure Investment, Sidewalk Labs (Google)
	Andrew Marino, Co-Head, Carlyle Infrastructure Opportunity Fund
3:45 - 4:30	SESSION 9:
	STATE-OF-THE-ART INFRASTRUCTURE
	Jose Luis Blanco Alvarez, Partner, McKinsey
	Al Green, Partner, McKinsey
4.20 4.45	CLOCING
4:30 - 4:45	CLOSING
	Sarah Hammer, Senior Director, Wharton Alternative Investments Initiative, and Adjunct Professor of Law,

University of Pennsylvania Law School

COCKTAIL RECEPTION

4:45 - 6:30

Participant Biographies

BRIAN BARLOW

Brian is Director of Infrastructure Investments at Sidewalk Labs, where he leads the investment, finance, and partnership activity for our infrastructure initiatives, including relationships with pensions funds, sovereign wealth funds, endowments, foundations, and asset management firms. Brian is responsible for defining, designing, and implementing new funding models, infrastructure finance, and delivery methods for Sidewalk Labs and its project in Toronto—one of the largest and most complex urban development projects in North America. In addition, Brian leads the evaluation of emerging technologies and services enabling new standards of innovation, sustainability, and affordability in infrastructure, including new construction materials and building and delivery methodologies.

Previously, Brian spent 11 years with the American Infrastructure Fund; he was a Managing Director and senior member of the team since its formation. He was instrumental in the development of many innovative tax efficient capital formation strategies, partnerships, and investments aimed at solving the U.S.'s complex urban infrastructure challenges.

DARREN BETCHEL

Darren Bechtel is the founder and managing director of Brick & Mortar Ventures, the leading sector-specific venture capital fund focused on emerging technologies to improve the way we design, build, and maintain our built environment. With a portfolio of eighteen built world startups, including early investments in PlanGrid, BuildingConnected, Rhumbix, Fieldwire, and ManufactOn, Bechtel has been the single most active early stage investor in AEC and FM tech over the past five years. Bechtel is a Stanford-trained engineer and MBA. He has more than eight years of venture investing experience as the founder and managing director of South Park Ventures and now Brick & Mortar Ventures. Prior to founding Brick & Mortar Ventures, he spent more than seven years in the medical device industry, initially as a research and development engineer designing and commercializing breast cancer diagnostic and surgical tools, and then as the turnaround CEO. He also founded and managed Soma CoLab, a San

Francisco-based co-working and incubator space for Stanford alumni. Bechtel currently serves on the boards of BuildingConnected, Fieldwire, ManufactOn, Zlien, Holobuilder, Safesite, and EverCharge, and he serves as a technology innovation advisor to several industry leading AEC and FM companies, including Bechtel, Autodesk, Cemex, Knauf, Hilti, United Rentals, and FMI. Darren Bechtel brings over 7 years of engineering, product and architectural design, and construction management professional experience to the Brick & Mortar team, as well as over 8 years of venture investing as the founder and managing director of South Park Ventures. Darren is a Stanford-trained engineer and MBA who remains closely connected to the young Stanford entrepreneurial community as the founder and developer of Soma CoLab, a San Francisco-based co-working and incubator space for Stanford alumni. Darren is involved in the boards of six startup companies and serves as a technology innovation advisor to several industry leaders across the global AEC and Facilities Management sectors.

JOSE LUIS BLANCO

Jose leads McKinsey's engineering and construction (E&C) work in North America, with a focus on real estate and construction technology. He advises capital project leaders across the project lifecycle, including investors, public sector institutions with large capital programs, and E&C or real estate project owners across Asia, Europe, Latin America, and North America.

Jose has served global E&C firms with a specialization in operational excellence, mergers and acquisitions, turnarounds, and digital transformations. He brings deep expertise in optimizing performance and unlocking value through embedding digital capabilities and deploying and scaling up new technologies.

Jose spearheads McKinsey's global E&C performance benchmark, which periodically reviews the financial and operating health of the world's top E&C firms. As a leader of our digital work in capital projects and infrastructure, he also leads McKinsey's construction technology landscape scan, which periodically maps emerging construction technology solutions against innovation and investment patterns.

Before joining McKinsey, Jose spent almost 10 years at ACS, Europe's largest E&C conglomerate, where he led hundreds of engineers and workers in completing some of the company's most complex projects. This included transforming a former bullring into a shopping mall in 2009 and constructing Agbar Tower, one of Barcelona's skyline landmarks, in 2006.

JESSICA BRENNAN

Jessica Hoffman Brennan is a Managing Director and Partner at the Carlyle Group. Jessica is responsible for investor relations and business development in the northeastern United States and works with many of the firm's investors, including sovereign wealth funds, public pension funds, insurance companies, ultra-high net worth family offices and several separate accounts.

Previously Ms. Brennan was a Managing Director in the Credit Suisse Private Fund Group in New York. Over her 20-year career she has worked on hundreds of different alternative investment vehicles and programs, including: private equity/buyout, growth equity and venture capital; alternative credit/senior, mezzanine, distressed and ABS; real assets/real estate, infrastructure and energy; liquid alternatives; and secondaries, coinvest, customized separate or strategic accounts. Ms. Brennan joined Donaldson Lufkin & Jenrette in 1999 from Deutsche Bank's Private Equity Group.

She holds an M.B.A. in finance from The Wharton School, The University of Pennsylvania and an A.B. degree in economics and literature from the University of Michigan.

Ms. Brennan is on the Women's Leadership Board of Women and Public Policy at the Harvard Kennedy School. She serves on the Dean's Advisory Council of the University of Michigan's Literature Science & the Arts College. She is also a board member of I-WIN, the Insurance-Women's Investment Network; a founding member of Plum Alley, a women's angel/VC investor network focused on social impact investing; and a member of the NY Women's Forum.

WILL BRILLIANT

Will Brilliant is a Partner of Global Infrastructure Partners (GIP), a global infrastructure investor with over \$40 billion in assets under management. Mr. Brilliant is a leader of GIP's North American energy equity investment business and is a member of GIP's Investment and Operating Committees. Mr. Brilliant is responsible for the origination, execution, management and realization of investments. He is currently a member of the Boards of Directors of Hess Midstream Partners (NYSE: HESM) and Hess Infrastructure Partners and is a former member of the Boards of Access Midstream Partners (NYSE: ACMP) and Access Midstream Ventures. Prior to joining GIP in 2007, Mr. Brilliant was an investment banker at Lehman Brothers. He is also a member of the Board of Directors of the Make-A-Wish Foundation of Metro New York and Western New York. Mr. Brilliant holds a BA from the University of California, Los Angeles and an MBA from the Wharton School of the University of Pennsylvania.

KEVIN CHAVERS

Mr. Kevin G. Chavers serves as Managing Director at BlackRock Solutions. Mr. Chavers serves as member of BlackRock's Financial Markets Advisory Group within BlackRock Solutions. Mr. Chavers has extensive experience focused on the mortgage capital markets and housing policy in both the public and private sectors. He provides advisory services focusing on housing and mortgage finance to clients and serves as BlackRock's senior coverage officer for the principal federal housing and mortgage related entities. Prior to joining BlackRock in 2011, Mr. Chavers served as a Managing Director at Morgan Stanley and served as its Senior Relationship Manager with coverage responsibilities for federal government and government related clients. He also served as head of global mortgage operating businesses of Morgan Stanley and led their strategic repositioning. He also led strategy, execution and banking for the mortgage principal finance team within the Securitized Products Group. Prior to joining Morgan Stanley, he served as vice president in the Mortgage Securities Department at Goldman Sachs & Co. He served as Treasurer of Bedford Stuyvesant Restoration Corporation. Mr. Chavers served as the President of Ginnie Mae in the Clinton Administration. He served as Majority Staff Counsel to the United States Senate Committee on

Banking, Housing and Urban Affairs. He began his career in the corporate real estate group at the law firm of Milbank, Tweed Hadley and McCloy in New York. Mr. Chavers serves as Chairman of Bedford Stuyvesant Restoration Corporation, the Architectural League of New York, the Friends of Education of the Museum of Modern Art, the University of Virginia School of Architectural Foundation and the Ridley Scholarship Fund at the University of Virginia. He served as member of the boards of the Municipal Arts Society and the Appleseed Foundation. Mr. Chavers is a graduate of Harvard Law School (1987) and earned a Bachelors in City Planning from the University Of Virginia School Of Architecture (1984).

CHARLES COHEN

Charles is Deputy Division Chief of the Debt and Capital Markets Instruments Division at the IMF. He was previously in the U.S. Treasury at the Financial Stability Oversight Council, prior to which he worked at Bain Capital Credit in corporate and sovereign debt investment, and also at the Boston Consulting Group. He has wide-ranging private and public sector experience in financial markets, policy, and regulatory issues. Charles holds a Ph.D. in Economics from Harvard University, and M.S. and B.S. degrees in Mathematics from the University of Chicago and Stanford University.

RAHMAN D'ARGENIO

Mr. D'Argenio is a Partner at Energy Capital Partners. He is involved in all areas of the firm's investment activities, with particular emphasis on fossil and renewable power generation and energy related services and manufacturing. Mr. D'Argenio currently serves on the boards of Sunnova Energy Corp., NESCO Holdings LP, Triton Power, CM Energy Holdings LP, and PLH Group, Inc. Prior to realization, Mr. D'Argenio served on the boards of Brayton Point Power, LLC, EquiPower Resources Corp., Odessa Power Holdings, LLC and Red Oak Power Holdings, LLC.

Prior to joining Energy Capital in 2010, Mr. D'Argenio spent seven years at First Reserve Corporation, an international energy-focused private equity firm based in Greenwich, Connecticut. His responsibilities at First Reserve included a leadership role in power, financial services and coal related investments. Prior to that, Mr. D'Argenio worked in the Energy & Utilities

Investment Banking Group at Deutsche Bank Securities. Mr. D'Argenio began his career in the structured finance group at Sempra Energy Trading.

Mr. D'Argenio received a B.A. in Mathematics and Economics from the University of Pennsylvania.

STACEY DION

Stacey Dion serves as Managing Director in the External Affairs group. She is based in Washington, D.C.

Ms. Dion advises Carlyle teams on the U.S. government's legislative and regulatory activities. She speaks to the current political environments in Congress and in the Administration.

Ms. Dion was most recently Vice President of Corporate Public Policy for The Boeing Company where she was responsible for developing and implementing the government relations strategy and tactics on corporate issues including tax, benefits, financial services, corporate governance, energy, environment, workforce training and education.

In her career in government, Ms. Dion was Policy Advisor and Counsel in the Office of the Republican Leader, where she served as lead Republican staff for negotiating and drafting the Economic Stimulus Act of 2008 on behalf of the House Republican Leader Boehner. Prior to that, she served as Tax and Pension Policy Advisor in the Office of the Majority Leader and was responsible for drafting the Pension Protection Act of 2006 and managing the Tax Increase Prevention and Reconciliation Act of 2005. From 2002-2003, Ms. Dion worked in the Employee Benefits Security Administration in the United States Department of Labor, where she developed final regulations, rulings and advisory opinions on ERISA. Ms. Dion began her career in a DC law firm.

Ms. Dion earned her B.A. from Merrimack College and J.D. from The Catholic University of America.

BURCU ESMER

Burcu Esmer is a research fellow at Wharton Alternative Investments Initiative and a faculty member at the Wharton School, University of Pennsylvania. Dr. Esmer earned her BSc in Economics and Minor in Mathematics from the Middle East Technical University (Turkiye), her MA in Economics and PhD in Finance from the University of Iowa. Dr. Esmer's primary areas of research are empirical corporate finance, banking and private equity. She investigates agency conflicts, and their impact on corporate policies.

RICK GEDDES

R. Richard "Rick" Geddes is a visiting scholar at the American Enterprise Institute (AEI), where he focuses on infrastructure public and private partnerships, the US postal system and postal delivery policy, and corporate governance. Concurrently he is professor of policy analysis and management at Cornell University and director of the Cornell Program in Infrastructure Policy.

PERRY GOLKIN

Perry Golkin is a Co-Founder and Chief Executive Officer at Public Pension Capital Management. Formerly, he was at Kohlberg Kravis Roberts & Co., a private equity firm that he joined in 1986. At KKR, Mr. Golkin has been involved in numerous acquisitions and has served on key committees supervising KKR operations. He has been a director for a number of KKR portfolio companies including Willis Group, Primedia, Inc., Walter Industries, Rockwood Chemicals, and American Re-Insurance Company. He also plays a major role in KKR investor relations and capital raising activities. Mr. Golkin practiced corporate law at Simpson Thacher & Bartlett prior to joining KKR and is also a certified public accountant.

While attending Penn Law, Mr. Golkin taught financial and managerial accounting at the Wharton School. He was a keynote speaker on Law and Entrepreneurship at Penn 's Institute for Law & Economics (ILE), has lectured at the Law School and the Wharton School, and served as Dean's Roundtable speaker. He is a Trustee of the University of Pennsylvania, an Overseer at the Law School, a Trustee of Penn Medicine and on the Board of Advisors of

the Institute for Law & Economics. Mr. Golkin also serves as a director of the Biomedical Research Alliance of New York.

AL GREEN

Alastair is a leader of our Chemicals & Agriculture and Private Equity Practices in the Americas.

Since joining McKinsey 2006, Alastair has led major performanceimprovement engagements for public- and private-sector clients on topics related to investment strategy and infrastructure development.

An expert on private equity and principal investing, Alastair has advised leading private-equity clients for nearly a decade, including leading 100-day planning and portfolio efforts for more than 15 oil field services and equipment (OFSE) businesses. Drawing on his expertise in emerging markets, he has recently begun to focus extensively on sub-Saharan Africa, leading our work in the region on infrastructure finance, water infrastructure, and social-impact investment.

In his role as a leader in the Chemicals & Agriculture Practice, Alastair directs McKinsey's efforts on industrial waste-water and fluid management. Alastair recently completed several multiple diligences in upstream OFSE, including fluids management in unconventional basins focused on outside-in cost assessments.

Prior to joining McKinsey, Alastair worked in Acumen Fund's Nairobi office, where he evaluated East African investment opportunities and co-led the fund's first Ugandan transaction. In the past two decades, he has worked on development efforts across Africa, including endeavors in Ghana, Kenya, Lesotho, Nigeria, and Tanzania.

ELI GROSS

Eli Gross is a Managing Director based in New York and is Head of the Firm's Global Transportation & Infrastructure Group. Eli joined Morgan Stanley in 1998 and previously worked in the Mergers & Acquisition Department. Eli received his MBA and BSc. from the Wharton School.

SARAH HAMMER

Sarah Hammer is Senior Director of the Alternative Investments Initiative at the Wharton School of the University of Pennsylvania, focusing her efforts on private equity, private credit, hedge funds, venture capital, and wealth management. Ms. Hammer is also an Adjunct Professor of Law at the University of Pennsylvania Law School, teaching an upper-level juris doctor course on financial regulation. Ms. Hammer is also a Member of the Management Advisory Committee of the International Telecommunications Union at the United Nations (ITU). The ITU leads global technical standards for the broadband, coordinates satellite orbits, manages radio-frequency spectrum, provides a platform for policy guidance on artificial intelligence, and promotes sustainable development, among other responsibilities. Ms. Hammer is also an Executive Education Instructor at the Wharton School, teaching an advanced course on capital markets.

Previously, Ms. Hammer was Acting Deputy Assistant Secretary for Financial Institutions and Director of the Office of Financial Institutions Policy at the United States Department of the Treasury. In this role, she led and directed the Department's policy responsibilities involving financial institutions, as well as oversaw the Federal Insurance Office (including the Terrorism Risk Insurance Program) and the Office of Critical Infrastructure Protection and Compliance (cybersecurity). She also assisted the Treasury Secretary in fulfilling responsibilities as a member of various entities, including the Board of the Securities Investment Protection Corporation (SIPC), where she served as a board member appointed by the Treasury Secretary, and the Pension Benefit Guaranty Corporation (PBGC), where she served as lead staff to the Treasury Secretary's board position. In addition, she led the cross-functional working team on the President's Executive Order 13772 on Core Principles for Regulating the Financial System, which conducted a comprehensive review of the entire financial regulatory framework, domestic and global.

Ms. Hammer has also held various leadership positions throughout financial services in management and investment strategy at the Vanguard Group, in fixed income portfolio management at PIMCO, in credit trading and hedge fund marketing at JP Morgan Chase, in portfolio analytics at BlackRock, and in macroeconomic research at Tudor Investments.

Ms. Hammer earned a J.D. from the University of Pennsylvania Law School, an M.B.A. from the Wharton School of the University of Pennsylvania (with a dual major in finance and statistics), and a Master of Studies from Oxford University. While in Law School, she worked for the Honorable Michael M. Baylson at the U.S. District Court for the Eastern District of Pennsylvania, Justice Jane Cutler Greenspan at the Supreme Court of Pennsylvania, and in the finance practice at Freshfields Bruckhaus Deringer. She is a licensed attorney and has a certification in Big Data from the Massachusetts Institute of Technology. She has also published extensively on financial regulation, investing, and tax policy.

Ms. Hammer is a Member of the Trustees Council for Penn Women, a Board Member and Vice President of the Women's Network of the Wharton Club of Philadelphia, a Wharton Class Ambassador and Reunion Co-Chair, and a Board Member of the University of Pennsylvania Law School Alumni Board of Managers. She is a Harry S. Truman Scholar and was selected for Global Board Ready Women. She has served on the board of trustees of a private day school in Pennsylvania. She has lived in Asia, the United Kingdom, and the United States.

DANIEL HARDY

Daniel C. Hardy is currently Chief of the Debt and Capital Market Instruments Division of the International Monetary Fund. In this position he tales a leadership role in Fund surveillance of developments in capital market instruments and institutions, including shadow banking; capacity building in debt management and debt market development; and Fund policy regarding sovereign debt management and restructurings.

PATRICK HENDY

Patrick focuses on Data Center and Enterprise IT Services investments. Patrick is currently a member of the Board of Directors of Canara, Cologix, and New Signature. Patrick previously served on the boards of Virtustream (acquired by EMC), mindSHIFT (acquired by Best Buy), and New Global Telecom (acquired by Comcast), and he was involved with a number of the firm's previous Internet Infrastructure, Enterprise IT Services, and Mobile

investments, including Presidio (acquired by American Securities), XM Satellite Radio (NASDAQ: XMSR), and NuVox Communications (acquired by Windstream). Before joining Columbia, Patrick worked at JPMorgan Chase & Co in their Telecom, Media and Technology investment banking group. And prior to that he worked at Wachovia Securities in their Debt Capital Markets group. Patrick received his B.A. from Vanderbilt University.

MARKUS HOTTENTROT

Markus Hottenrott is a Managing Director and Chief Investment Officer of Morgan Stanley Infrastructure Partners ("MSIP"). Markus has been with Morgan Stanley for 19 years. He has been part of MSIP since inception. He originated and led the execution of Fund I's investment in Agorà Investimenti, the acquisition of Madrileña Red de Gas ("MRG") and its subsequent bolt-on acquisition, and led MSIP's execution of the Montreal Gateway Terminals transaction as well as the investment in the debt of British Airport Authority and the subsequent exit from the position. In his role as CIO, he was involved in the acquisitions of Continuum Wind, Affinity Water, General Electric's stake in Southern Star, the follow-on investments in Montreal Gateway Terminals and Agorà Investimenti, as well as Fund II investments in Eureka Hunter, Hornet Midstream, Ital Gas Storage, VTG AG and Red Oak Power. He currently serves on the board of directors of Agorà Investimenti and VTG AG, and served on the board of Montreal Gateway Terminals and MRG prior to their sales in 2015.

Prior to joining MSIP, Markus co-headed Morgan Stanley's European transportation and infrastructure industry group in the Investment Banking Division, where he specialized in privatizations and structured finance transactions in Europe and the Middle East. Before that, in the Firm's German office, Markus concentrated on the public transportation and infrastructure sectors.

Markus has a legal background and studied at the universities of Heidelberg, Dresden and Munich. He wrote his doctoral dissertation in law at Humboldt University in Berlin.

KEVIN KAISER

Kevin Kaiser is Senior Director of the Alternative Investments Initiative and Adjunct Full Professor of Finance at the Wharton School of the University of Pennsylvania. He was Professor of Management Practice and on the finance faculty at INSEAD since 1992. Kevin holds a BA (Honours) in Economics from The University of Western Ontario and a PhD in Finance from the Kellogg Graduate School of Management at Northwestern University.

Kevin's research has focused on private equity, corporate restructuring and financial distress, more recently oriented around corporate governance and management for value creation. In addition to his research in academic and practitioner journals and newspapers, he has co-authored two books, The Blue Line Imperative, with David Young, and Becoming a Top Manager, with Michael Pich and I.J. Schecter.

Kevin teaches extensively in executive and degree programmes. He joined Wharton in 2017 from INSEAD where he was an eight-time recipient of the MBA award for Best Teacher for Electives, a three-time recipient of the EMBA award for Best Teacher for Electives and in 2016 received INSEAD's award for Outstanding Contribution to Executive Education. In 2013, Kevin was a finalist for the Economist Intelligence Unit's world-wide Business Professor of the Year competition. He brings to the classroom his deep knowledge of academic theory together with his real-world experience working in the Corporate Finance and Strategy practice of McKinsey & Co. (1997-1999), and as a principal in bfinance.com, a venture capital-financed marketplace for business finance (1999-2002).

RECEP KENDIRCIOGLU

Recep Kendircioglu is a Senior Managing Director at John Hancock Financial Services. Recep leads the Power and Infrastructure team and he oversees over \$23 billion of assets comprised of private/public/project finance debt and private equity investments.

Prior to Hancock, Recep worked for Enel North America (ENA) acquiring and developing renewable energy projects in the US and Canada and also supported privatization bids in Poland and France. Prior to Enel, Recep was

employed by InterGen where he worked on development and financing of 3000 MW of thermal plants in the US. He also took various asset management and finance roles in the organization; including restructuring \$1.5 billion of project debt and managing the Strategy and Planning group.

Recep holds an MBA from Rice University and a BS in Computer Engineering from Bogazici University. Recep is a CFA Charterholder, Certified Financial Risk Manager (FRM) and a member of the Boston Security Analysts Society.

AARON KLEIN

Aaron Klein is a fellow in Economic Studies and serves as policy director of the Center on Regulation and Markets. He focuses on financial regulation and technology, macroeconomics, and infrastructure finance and policy. Previously, Klein directed the Bipartisan Policy Center's Financial Regulatory Reform Initiative and served at the Treasury Department as deputy assistant secretary for economic policy.

Prior to his appointment as deputy assistant secretary in 2009, he served as Chief Economist of the Senate Banking, Housing and Urban Affairs Committee for Chairmen Chris Dodd and Paul Sarbanes. He worked on financial regulatory reform issues including crafting and helping secure passage of the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010. He also played leading roles on housing finance reform, transportation and infrastructure policy.

Klein is a graduate of Dartmouth College and the Woodrow Wilson School for Public Affairs at Princeton University.

HANS PETER LANKES

Hans Peter Lankes is IFC's Vice President of Economics and Private Sector Development. In this capacity, Mr. Lankes is responsible for ensuring that IFC's strategies and projects have a consistent focus on development results. He also provides independent economic analysis and oversight to all IFC's operations, and ensures coordination with the World Bank and other international financial institutions on private sector development issues.

A German national, Mr. Lankes previously served as the Managing Director of Corporate Strategy at the European Bank for Reconstruction and Development. He was also a member of the EBRD's Executive Committee. As Managing Director, he advised the EBRD President on the institution's strategy and was responsible for designing and achieving shareholder support for its priorities. He also led the EBRD's expansion into the Southern and Eastern Mediterranean region.

Previously, Mr. Lankes served as the EBRD's Acting Chief Economist, reorganizing the department into the bank's research hub. As Acting Vice President for Policy from 2012 to 2013 and again in late 2014, he established the department as a focal point for the in-country delivery of policy reforms.

Prior to joining the EBRD in 2007, Hans Peter worked at the International Monetary Fund in Washington, D.C., where he was Chief of the Trade Division and Adviser in the Policy Development and Review Department. His earlier career includes positions at the Central American Business School, the Nicaraguan Ministry of Economy, and the German-Thai Chamber of Commerce, before a first period of employment at the EBRD between 1993 and 2000.

Mr. Lankes holds a Ph.D. in Public Policy and a Master of Public Administration from Harvard University, as well as economics degrees from Albert Ludwigs Universität Freiburg and Université de Grenoble.

CHRIS MANN

Christopher L. Mann coordinates Sullivan & Cromwell's global infrastructure practice. Mr. Mann has more than 25 years of experience in a wide variety of corporate and financing matters in infrastructure, natural resources and other sectors, including project development and finance, mergers and acquisitions, joint ventures, private equity, capital markets, strategic finance and restructuring matters. He has acted frequently for sponsor and lending clients, pension funds, sovereign wealth funds, private equity funds and hedge funds in equity and debt investments in the United States, Latin America, southern Africa and elsewhere. He is a core member of the Firm's Latin America team and also co-heads the Firm's Africa practice.

ANDREW MARINO

Andrew Marino is the Co-Head of Carlyle Global Infrastructure Opportunity Fund ("CGI") and is based in Washington, D.C. Previously, Mr. Marino was the Chief Operating Officer of the Natural Resources group, focusing on Carlyle's investments and strategy in the Energy and Natural Resources sectors. Mr. Marino serves on the investment committee of Carlyle International Energy Partners, Carlyle Power Partners II and NGP Natural Resources XI.

From 2004 until 2012, Mr. Marino was a member of the U.S. Buyout team where he focused on investments in the Chemical, Metals and Energy sectors including Kinder Morgan, Axalta, PQ Corp and JMC Steel.

Prior to joining Carlyle, Mr. Marino was a Vice President at Morgan Stanley where he focused on mergers, acquisitions and restructuring assignments in a variety of industries in both the US and in Europe. For several years prior to business school, Mr. Marino lived and worked in Hong Kong and China identifying private equity investments in China and Southeast Asia.

Mr. Marino is a graduate of Dartmouth College and received his MBA from the University of Pennsylvania's Wharton School.

Mr. Marino serves on the Boards of Discover Exploration Limited and Traxys. Mr. Marino previously served on the boards of PQ Corp, JMC Steel and Varo Energy. Mr. Marino also previously served on the Board of Trustees of Capital City Public Charter School.

EMMETT MCCANN

Mr. McCann is a managing director and co-portfolio manager of Oaktree's Infrastructure Investing strategy, specializing in the transportation sector. He joined Oaktree in 2014 from Highstar Capital with over 19 years of experience in private equity, investment banking and finance. Prior to joining Highstar in 2009, Mr. McCann helped lead Morgan Stanley's infrastructure effort in Europe and North America. Prior to joining Morgan Stanley, he worked in infrastructure investment banking at Goldman Sachs. Over his career, Mr. McCann has advised multiple government agencies (both in

the U.S. and internationally) on Public-Private Partnerships ("PPP") across the transportation sector. Mr. McCann currently serves on the boards of directors of the Ports America Companies, Aerostar Airport Holdings, LoneStar Airport Holdings LLC and CrowdVision Ltd. He holds a B.A. degree in finance from the University of Wisconsin-Madison and an M.B.A. with honors from the University of Chicago.

LARS PACE

Mr. Lars Pace has been Principal at Hamilton Lane Corporation since April 4, 2017 and served as its Vice President of Fund Investment Team until April 3, 2017. Previously, he was a Portfolio Manager and Manager of Alternative Investments at American Beacon Advisors, Inc. He is a part of Real Assets team. Mr. Pace oversaw a \$1 billion portfolio of private equity investments at the firm. Previously, he was a Financial Analyst with American Airlines Inc. and Ford Motor Company. Mr. Pace received an M.B.A. from the University of Wisconsin-Madison and a B.A. from Duke University.

EDWARD PALLESEN

Mr. Edward Pallesen, JD serves as the Head of Infrastructure Investment Group for the Americas at Goldman Sachs Group, Merchant Banking Division. Mr. Pallesen serves as a Director of the Main Investment Sector for the Commercial Banking at Goldman Sachs& Co. in New York. Mr. Pallesen joined Goldman Sachs & Co. in 1999 Mr. Pallesen served as a Member of the Technology, Resource and Telecommunications Group at Goldman, Sachs & Co. where he focused in telecommunications services as well as in select technology and resource companies. Prior to joining Goldman, Sachs& Co., Mr. Pallesen worked as secretary of the judicial law in the United States Supreme Court. He has been Non-Independent Director of Red de Carreteras de Occidente, S.A.B. de C.V. since March 16, 2012. He served as a Director of Goldman Sachs & Co. since 2007. He is a member of the administration board of Herny Street Settlement, beneficiary of the foundation of the University of Nebraska. Mr. Pallesen holds a Juris Doctor from Harvard University Law and a B.A. from Harvard University. He has obtained a MPhil and a DPhil from Oxford University, where he was a Rhodes scholar.

KYLE RUSS

Kyle is a managing director in the Department of Government Affairs. He serves as the secretary to the Regulatory Reform Executive Leadership Group. Kyle joined Goldman Sachs in 2007 as an analyst and was named vice president in 2010. He was named managing director in 2015. Kyle earned a BA in Economics and International Studies from Rhodes College and an MBA from the Robert H. Smith School of Business at the University of Maryland.

ZIAD SARKIS

Ziad Sarkis is the director of Financial Research at the Wharton Alternative Investments Initiative. Prior to his current role, he worked for Zouk Capital, PricewaterhouseCoopers, and Deloitte in the U.S. and EMEA regions. He advised private equity funds, family offices, and corporate groups on mergers, acquisitions, and capital market transactions. Ziad is a U.S. certified public accountant and holds a Master of Business Administration in Finance from the Wharton School of the University of Pennsylvania and a Bachelor of Science in Accountancy (summa cum laude) from Arizona State University. He is fluent in Arabic, French, and English.

DAMIAN SECEN

Damian Secen is Senior Managing Director (MIRA), Infrastructure and Utilities, Americas Based in New York.

Damian leads the origination and execution of new investments, platforms and portfolios for MIRA's infrastructure and utilities investment business for the Americas.

He joined Macquarie Group in 2001 and for the last 16 years he has worked extensively in the infrastructure and utilities space globally, including leading several landmark investments for MIRA and Macquarie Group.

Prior to joining MIRA in 2009, Damian worked in Macquarie Capital where he led numerous acquisitions, divestments, restructurings, re-financings and take private transactions for clients, including MIRA. He has acted as CEO and chairman of various Macquarie Group investments and funds.

Prior to joining Macquarie Group, Damian was a senior banking and finance lawyer with Ashurst and, before that, a tax accountant.

He has a Bachelor of Commerce, a Bachelor of Law (honours), and is a graduate of Harvard's Advanced Management Program.

DAVID SKEEL

David Skeel is S. Samuel Arsht Professor of Corporate Law at the University of Pennsylvania Law School. He is the author of True Paradox: How Christianity Makes Sense of Our Complex World (InterVarsity, 2014); The New Financial Deal: Understanding the Dodd-Frank Act and Its (Unintended) Consequences (Wiley, 2011); Icarus in the Boardroom (Oxford, 2005); Debt's Dominion: A History of Bankruptcy Law in America (Princeton, 2001); and numerous articles on bankruptcy, corporate law, financial regulation, Christianity and law, and other topics. Professor Skeel has also written commentaries for the New York Times, Wall Street Journal, Books & Culture, The Weekly Standard, and other publications. He has received the Harvey Levin award three times for outstanding teaching, as selected by a vote of the graduating class, the Robert A. Gorman award for excellence in upper level course teaching, and the University's Lindback Award for distinguished teaching.

ANTHONY UCCELLINI

Mr. Uccellini is an Executive Director based in New York responsible for the infrastructure sector, with a focus on transportation. He has over a decade of investment banking experience providing mergers & acquisitions advisory services, with a focus on infrastructure transactions. Since joining Morgan Stanley in 2007, he has worked on dozens of M&A processes and now heads Morgan Stanley's coverage of the infrastructure sector for the Americas. Mr. Uccellini received a JD from Harvard Law School and a BS in International Economics from Georgetown University's School of Foreign Service.

- Some of Mr. Uccellini's key infrastructure experiences include:
- Advisor to Advent International on its sale of TCP Participações SA to China Merchants Port Holdings
- Monetization of Kohlberg & Co. stake in SP+ Corporation via an underwritten offering

- Advisor to Fortress Investment Group on its sale of Florida East Coast Rail to Grupo Mexico
- Advisor on the sale by Morgan Stanley Infrastructure Partners of Montreal Gateway Terminals to a Fiera Axium-led consortium
- Advisor to Genesee & Wyoming on its acquisitions of the Providence & Worcester Railroad and Glencore Rail (with Macquarie Infrastructure)
- Advisor to the Government of Canada and CDEV on its maritime ports scoping study
- Advisor to an under bidder consortium on the potential acquisition of Indiana Toll Road
- Advisor to an under bidder on the potential acquisition of Billy Bishop Toronto City Airport
- Some of Mr. Uccellini's key general M&A experiences include:
- Advisor to EMC Corp on its sale to Dell, and EMC / Dell's subsequent divesture of its enterprise content management business to Open Text
- Advisor to UPS on its announced acquisition of TNT Express
- Advisor to Office Depot on its PIPE investment from BC Partners and subsequent merger with OfficeMax
- Advisor to Gavilon on its sale to Marubeni
- Advisor to Walter Energy on its acquisition of Western Coal

DEREK UTTER

Derek Utter has been the Chief Development Officer of the Port Authority of New York & New Jersey since December 2017. In this role, he provides leadership and oversight in the development of the agency's key capital projects and oversees several groups, including Real Estate Development, Planning and Regional Development, the Office of Environmental and Energy Programs, and the Project Management Office, which manages and monitors the 10-year Capital Program.

Prior to joining the Port Authority, Derek was the Director of Finance and Restructuring in the Office of Governor Andrew Cuomo where he led teams to advance high-priority infrastructure projects, including the LIRR Mainline Expansion Project, Javits Center Expansion, and Moynihan Train Hall. He also led efforts to improve government efficiency and service delivery, including helping establish an award-winning Lean program and driving a transformation of the Department of Motor Vehicles to reduce wait times by over 50% and improve service.

Prior to joining the Governor's Office, Derek was an M&A banker at Morgan Stanley and JP Morgan and a financial sponsors coverage banker at Banc of America Securities. Early in his career, he served as a staff member for the White House Council of Economic Advisers. Derek received an M.B.A. in Finance from the Wharton School and a B.A. in Economics from UCLA.

TRENT VICHIE

Trent is a Co-Founder, Co-Chairman and Co-CEO of Stonepeak Infrastructure Partners and has been involved in all phases of the firm's development since its founding in 2011.

Trent has 20 years of experience investing in infrastructure, and prior to forming Stonepeak was a Senior Managing Director in Private Equity and co-head of the infrastructure investment group at Blackstone. Prior to Blackstone, Trent was a Managing Director with the Macquarie Group in New York.

Trent presently sits on the boards of the Carlsbad Desalination Project, Cologix, euNetworks, Extenet Systems and Vertical Bridge, and is a former director of Northstar Renewable Power and Tidewater Holdings. Trent has been involved in a wide range of infrastructure equity investments and transactions in the rail, roads, airports, communications and utilities sector totaling over \$10bn.

Trent received a Master's degree in Economics from Macquarie University in Sydney Australia, and is a fellow of the Institute of Actuaries of Australia. He is a CFA Charterholder.

EMIL WOODS

Emil Woods is a founding partner at Liberty City Ventures. He also cofounded Cedar Hill Capital Partners LLC (Cedar Hill) in 2004. He currently serves as Portfolio Manager of Cedar Hill, which is an institutional asset management complex that comprises several funds, including hedge, venture and private equity funds. Prior to founding Cedar Hill, Emil was a portfolio manager at SAC Capital Management. Prior to that, he worked at Goldman, Sachs & Co. for over 8 years in various capacities in the Equities and Asset Management divisions, including as a portfolio manager as well as head trader.

Emil is on the Board of Directors of the GO Project, which provides critical academic, social and emotional support to low-income New York City public school children. Emil is the founder and a trustee of the Imago Dei Foundation, serves on the board of The Centurion Foundation and is an Undergraduate Executive Board member of the Wharton School of the University of Pennsylvania. Emil holds a B.S.E. from the Wharton School, of the University of Pennsylvania, where he sponsors the Emil K. Woods Award for entrepreneurship and well as the Su Chin Catherine Chian Scholarship.

BILGE YILMAZ

Bilge Yilmaz is the Wharton Private Equity Professor and professor of finance at the Wharton School. Prior to his current appointment, he was a faculty member at the Graduate School of Business, Stanford University. He received his first degrees in electrical engineering and physics from Boğaziçi University and his PhD in economics from Princeton University.

Professor Yilmaz's research focuses on corporate finance, alternative investments, and political economy. Recently, he has written on corporate governance, credit rating agencies, hedge funds, private equity, security design, short-selling constraints, corporate bankruptcy, and banks' internal risk models. His earlier articles appeared in leading academic journals including the top three in the field: Econometrica, American Economic Review, and Journal of Political Economy.

Professor Yilmaz has designed a number of courses in corporate finance and alternative investments. He currently teaches courses on mergers and acquisitions, private equity, corporate bankruptcy, and European financial markets. He also leads the Wharton School's Alternative Investments Initiative. Outside of Wharton, he is actively involved in asset management.

GLENN YOUNGKIN

Glenn Youngkin is Co-Chief Executive Officer of The Carlyle Group and a member of Carlyle's Board of Directors. He is based in Washington, DC.

From May 2015 to December 2017, Mr. Youngkin served as President and Chief Operating Officer. From June 2014 to May 2015, Mr. Youngkin served as Co-President and Co-Chief Operating Officer. From 2011 until May 2014,

Mr. Youngkin was Carlyle's Chief Operating Officer. From October 2010 until March 2011, Mr. Youngkin served as Carlyle's interim principal financial officer. From 2005 to 2008, Mr. Youngkin was the Global Head of the Industrial Sector investment team. From 2000 to 2005, Mr. Youngkin led Carlyle's buyout activities in the United Kingdom and from 1995 to 2000, he was a member of the U.S. buyout team. Prior to joining Carlyle in 1995, Mr. Youngkin was a management consultant with McKinsey & Company and he also previously worked in the investment banking group at CS First Boston.

Mr. Youngkin earned his B.S. in mechanical engineering and his B.A. in managerial studies from Rice University and his MBA from the Harvard Business School, where he was a Baker Scholar.

Mr. Youngkin has served on the Board of Directors of numerous Carlyle portfolio companies. Mr. Youngkin also currently serves on several non-profit governing boards, including the Board of Trustees of the National Cathedral School, the Board of Directors of the Rice Management Company, and the Vestry of Holy Trinity Church.



Infrastructure Investment Roundtable

Wharton Alternative Investments Initiative 3620 Locust Walk 2300 Steinberg Hall - Dietrich Hall Philadelphia, PA 19104

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