

US INFRASTRUCTURE SPENDING--A ROADMAP FOR THINKING BROADLY

Now that the need for renewed increases in US infrastructure spending is widely acknowledged and is a focus of Washington policymakers, private companies and the investment community, there are many issues involved that will affect what legislation is ultimately enacted, how it affects the economy, jobs, interest rates and the Fed's perspective on monetary policy, and of course the investment opportunities it will present. A few points:

- Both sides of the political aisle favor more infrastructure spending (although they disagree significantly on how to finance it) so there is a high probability that legislation eventually will be enacted. My hunch is the legislation will involve significant increases in spending on programs that are very broad in nature, and the actual spending will be spread out over many years.
- **“Roads and bridges” are basic foundations of the nation’s infrastructure--that’s obvious--but “infrastructure” in modern society involves much more, and any legislation will involve increased spending in many areas including the electric grid, air traffic control systems, oil and gas pipelines, transportation systems including ports, cyber security and technology infrastructure, national security, disease control and green energy. Think outside the box on what comprises infrastructure needs in our modern society. One can bet that Congress will allocate resources to those perceived needs.**
- The mounting impetus toward more infrastructure spending is driven not just by the deterioration of existing infrastructure, but the acknowledgment that the Fed’s persistent monetary ease has little if any stimulative impact, bringing traditional fiscal stimulus back in vogue, despite its spotty track record.
- The outcome of the Congressional elections that determine which party controls the fiscal agenda and debate is critically important to the magnitude and composition of infrastructure spending and how it is financed.
- The Fed is publicly supporting more infrastructure spending and is already providing estimates of how it believes fiscal stimulus would temporarily boost economic growth and *raise the natural rate of interest*.
- More infrastructure spending would generate jobs and may add to GDP, although the magnitude and duration of the economic stimulus will depend on how the spending increases are financed--and whether the infrastructure spending is wisely allocated to useful projects that increases productive capacity or is wasted (like President Obama’s 2009 fiscal stimulus program).

Big political appetite for infrastructure spending. Both Clinton and Trump included more infrastructure spending in their official campaign platforms. In meetings I had earlier this year with Congressional leaders and Administration officials, it was made clear that both sides of the political aisle support more infrastructure spending. Large spending increase numbers were kicked around: a package exceeding 2% of GDP (\$360 billion in 2016 terms) was considered reasonable, and some policy leaders indicated that higher figures would be acceptable. Keep in mind that the Congressional Budget Office--Congress’ **official budget scorekeeper**--bases its budget estimates on 10-year budget projections. With compounding over a 10-year period, a “headline” spending increase may exceed \$1 trillion.

24 October 2016

While the political parties agree on the need for more infrastructure spending, they disagree on how to finance it and how projects would be identified and vetted and ultimately allocated through the different layers of government.

If as the current polls suggest, the upcoming elections result in a split in political power, with a Clinton victory and Republicans maintaining control of the House of Representatives, enactment of an infrastructure spending program likely would be delayed and modified to a smaller amount. Ultimately, legislation would be enacted, but those betting on quick enactment of a big infrastructure program with rapid spend may be disappointed.

Financing issues. Clinton proposes that the increase in infrastructure would be financed largely through higher taxes on higher income tax filers and the wealthy (higher taxes on income, capital gains, estates and penalties and fees on corporations, etc.) Clinton's platform also proposes a new tax based on gasoline usage. Interestingly, while this proposal has not been mentioned much on the campaign trail, Republicans tend to favor user fees and may approve of this source of tax receipts.

Trump's platform proposes cuts in other programs to offset increases in infrastructure spending, but does not specify the programmatic changes that would generate the savings. With Trump trailing so much in the polls, his platform matters less, but Congressional concerns about higher taxes and higher deficits and debt projections can be expected to influence the deliberations about infrastructure legislation.

Clinton's platform would create a "National Infrastructure Bank" that would be capitalized with government deficit spending and leveraged (with more government debt), and would create a bureaucracy that would determine how to allocate the resources. *This is a fancy way to institutionalize a centralized bureaucracy to pick projects and finance them. It may sound attractive on paper--especially to central control type bureaucrats and private sector corporations with effective lobbying efforts--but the dismal track record of historic government endeavors in picking the right projects should be a cold splash of reality.* Moreover, such a National Infrastructure Bank would represent a further shifting of the fiscal purse away from Congress and toward non-elected bureaucrats and the Administration--something Congress likely would push back on.

Democrats likely will advocate another "backdoor" financing method: redirecting some of the Fed's net profits that are remitted to the Treasury's general fund and dedicating those funds to infrastructure spending. The Fed's net profits and remissions to the Treasury have soared to roughly \$100 billion from \$25 billion as a consequence of positive carry provided by the Fed's bulging balance sheet. This use of the central bank balance sheet as a fiscal policy tool is inappropriate and downright scary, for many reasons. But unfortunately, there is precedent: last year's Highway legislation "siphoned" money from the Fed's profits to finance the Highway Trust Fund. In this age of borrowing from the future, some policymakers will view this source of potential funding as cheap money. My hunch is the Republican leadership would try to prevent this from happening.

Significant issues of the purpose of infrastructure spending increases and of how the program(s) should be administered are critically important and lessons from the past will influence the policy debate. It is widely acknowledged that a lot of the \$125 billion of infrastructure spending that was part of the 2009 fiscal stimulus package was wasted and provided little **lasting impact on the economy or jobs, with none of the "fiscal multiplier effects" that its economic authors had promoted.** In its rush to get money into the economy as quickly as possible, the Obama Administration provided grants to **states to spend the money on "shovel ready" projects.** No meaningful metrics were established to determine whether projects were worthwhile or whether the money was allocated in efficient ways.

Based on that experience, the policy debate on new infrastructure initiatives will be much more deliberate, detail-oriented and thoughtful. Longer-term projects with long implementation lags will be the key focus. Only a small portion will be allocated to "shovel ready" projects with the aim of near-term fiscal stimulus.

Congress' important role in the legislative process. If Republicans maintain control of the House, while favoring more infrastructure spending, they would lean against Clinton's proposal to finance it through tax increases. They would reject the establishment of a new National Infrastructure Bank. Critically important, the House Ways and Means Committee, Chaired by Congressman Kevin Brady--a pro-growth tax advocate and fiscal conservative--and the House Budget Committee Chair Joe Price would support House leader Paul Ryan in pushing back on a large infrastructure spending proposal that was not accompanied by significant spending cuts in other government programs.

In light of Clinton's spending increase proposals in many areas, including various income support programs, child education and child care and student loan forgiveness, and the fact that defense spending already has been downsized, areas of agreement between the parties would be limited. Eventually, a compromise would lead to a trimmed down infrastructure spending program. But the legislative process may be elongated.

If by small chance Democrats regain control of Congress, large portions of Clinton's infrastructure proposal would be enacted, and fairly quickly. In this case, the effort to accomplish dual objectives of actual infrastructure improvement and

short-term fiscal stimulus would lead to a quicker flow of spending and more job creation, but more waste and lower fiscal multipliers.

Infrastructure, broadly conceived. A sizeable chunk of any legislation will be allocated to roads and bridges; the need for repair is clear. But when one thinks about infrastructure, it encompasses a lot more. It includes the basic physical and organizational structures and facilities that are required for the operation of society. In modern society, roadways are important, but so are avenues of communication; connectivity and linkages in information and data are directly analogous to bridges that connect roads and are now central to the nation's infrastructure. *Just as dramatic advances of technological innovation have generated big changes in the composition of the stock of capital in the private sector, infrastructure comprises more than roads and bridges.* As a benchmark, investment in information processing equipment and software now comprise nearly one-third of all business fixed investment, up from 10% in 1990, while investment in structures comprises only 20%, down from 70% in the 1980s. "Intangible capital" is also a sizeable component of capital spending.

The Administration and Congress are very likely to consider a broad array of "public goods" that fit under the infrastructure umbrella:

- I. The electrical grid. This needs upgrading, uniformity, efficiency and connectivity across grids. It also involves safety and security of the power sources and grids.
- II. Air traffic control systems. Safety of the airways is a public good. Systems require upgrading of computer software, communications, etc.
- III. Oil and gas pipelines. This involves repairs expansions for safety, and security (Clinton mentions this).
- IV. Transportation, transshipment mechanisms and ports. Upgrades that increase efficiency are critical.
- V. Cyber security/Technology Infrastructure. As the Department of Homeland Security's website states: "Our daily life, economic vitality and national security depend on a stable, safe, and resilient cyberspace". The DHS budget authority in Fiscal Year 2016 was \$65 billion. It identifies securing federal networks, cyber incident response, information sharing, protecting critical infrastructure, combating cybercrime, cyber safety and cyber insurance and privacy. Obviously, the government perceives cyber security as a key public good. It will lobby for big spending increases in many activities.
- VI. National security. Select projects may be considered part of the nation's infrastructure. (Select space projects may also be included)
- VII. Disease control. The government's **Center for Disease Control (CDC) has been forced to respond to an alarming number of threatening infectious diseases and food borne pathogens and also has to deal with biological-related national security threats.** Spending increases to support the growing demand on the CDC **and related activities. The CDC's budget in 2017 is \$7 billion, of which less than \$2 billion is for protection against natural and bioterrorism and global disease).**
- VIII. Green energy initiatives. This includes all renewables, sun wind, etc.

Thinking outside the box on infrastructure is appropriate not just in terms of the concept of public goods, but it is also consistent with how the Congressional legislative process works. Clinton's platform specifically mentions clean and renewable energy initiatives, along with pipeline safety and rails. Similarly, Trump refers to a wide array of infrastructure improvement requirements.

Any big piece of legislation will include a lot of related (and unrelated) provisions. Once Congress begins to focus on infrastructure legislation, many key committees and an array of interests will get involved. The House and Senate leaderships and the House and Senate Budget Committees will work with (or against) the Administration to determine the acceptable magnitude of the program, in conjunction with the House Ways and Means Committee that will determine how to finance the legislation. The CBO's budget scorekeeping of the deficit and debt consequences of pending legislation will be a crucial factor in policy deliberations. As these broader parameters of infrastructure legislation are determined, the programmatic details will be influenced by a wide array of interests reflected in various Congressional committees on infrastructure, commerce; transportation and aviation; energy; national security; and health.

Thinking more broadly about what will be included in potential infrastructure legislation greatly widens investment opportunities in a number of industries. Think beyond construction, cement and steel companies: just to name a few, a wide array of computer and software technology, information processing with a wide variety of applications in many industries will be in demand as well as every type of engineering, big-data business. Growing industries including technology and cyber security will be enhanced. In addition, large consulting, legal and accounting firms will be involved in the process of every new government contract, and there will be many.

Potential economic impacts, perceived and actual. The economic and financial impacts of infrastructure spending legislation will depend on a lot of moving parts. The Administration and the Fed will use standard macroeconomic models to estimate the impacts, even though these models have had poor track records in forecasting the economy and assessing the impact of fiscal and monetary stimulus. While they will drive the policy debate, the actual outcomes may differ--by a

fair amount.

In general, by relying on changes in cyclically-adjusted spending and deficits and applying standard fiscal multipliers to them, the Administration's and Fed's models will show that 1) infrastructure spending will generate a sizeable boost to real GDP and jobs that will last for several years, 2) that the government's investment will modestly lift potential growth, implying some permanent longer-run benefits for output and jobs, and 3) the fiscal stimulus will lift the natural rate of interest.

Fed Vice Chair Stanley Fischer, in a recent speech to the Economic Club of New York, presented estimates of the impact of **government spending and tax changes on real interest rates based on the Fed's FRB-US model**. These and other model-based estimates must be taken with a grain of salt, but are nevertheless important because they reflect the Fed's way of thinking. The CBO's macromodel operates in much the same way, such that the positive economic impacts of infrastructure legislation would partially mitigate its budget impact.

The actual economic and financial impacts depend on the efficacy of the infrastructure projects--whether they are necessary, designed and developed properly, increase efficiency, are well-managed, etc.--and how they are financed. According to these models, the economic impact of a big infrastructure spending increase would be dampened if it is financed by higher taxes. If financed by more deficit spending, or through monetization (either directly or indirectly), the model-based estimated economic impact would be much larger.

These estimates are driven by the assumptions and parameters of the models--and history shows clearly that such estimates are unreliable. But such realities and economic rationality frequently take a back seat to political expediency in Washington's policy deliberations. Presently, there is building momentum toward infrastructure legislation. Thinking broadly and outside the box is essential in understanding what will unfold and how to plan for it.

Disclaimer

This document was compiled by the above mentioned authors of the economics department of Berenberg Capital Markets LLC (hereinafter also referred to as “BCM”). **BCM has made any effort to carefully research and process all information.** The information has been obtained from sources which we believe to be reliable such as, for example, Thomson Reuters, Bloomberg and the relevant specialised press. However, we do not assume liability for the correctness and completeness of all information given. The provided information has not been checked by a third party, especially an independent auditing firm. We explicitly point to the stated date of preparation. The information given can become incorrect due to passage of time and/or as a result of legal, political, economic or other changes. We do not assume responsibility to indicate such changes and/or to publish an updated document. The forecasts contained in this document or other statements on rates of return, capital gains or other accession are the personal opinion of the author and we do not assume liability for the realisation of these.

This document is only for information purposes. It does not constitute a financial analysis, investment advice or recommendation to **buy financial instruments. It does not replace the recipient’s procurement of independent legal, tax or financial advice.**

This document has been classified as fair and balanced for the purposes of FINRA rules. Please contact Berenberg Capital Markets LLC (+1 617.292.8200), if you require additional information.

Remarks regarding foreign investors

The preparation of this document is subject to regulation by US law. The distribution of this document in other jurisdictions may be restricted by law, and persons, into whose possession this document comes, should inform themselves about, and observe, any such restrictions.

United Kingdom

This document is meant exclusively for institutional investors and market professionals, but not for private customers. It is not for distribution to or the use of private investors or private customers.

Copyright

BCM is a wholly owned subsidiary of Joh. Berenberg, Gossler & Co. KG (“Berenberg Bank”). BCM reserves all the rights in this document. No part of the document or its content may be rewritten, copied, photocopied or duplicated in any form by any means or redistributed without the BCM’s prior written consent. Berenberg Bank may distribute this commentary on a third party basis to its customers.

© July 2015 Berenberg Capital Markets, LLC, Member FINRA and SPIC.

Contacts: BCM

www.berenberg.com
e-mail US: firstname.lastname@berenberg-us.com



JOH. BERENBERG, GOSSLER & CO. KG

Internet www.berenberg.com

E-mail: firstname.lastname@berenberg.com

EQUITY RESEARCH

AEROSPACE & DEFENCE

Andrew Gollan +44 20 3207 7891
Charlotte Keyworth +44 20 3753 3013
Ross Law +44 20 3465 2692

AUTOMOTIVES

Adam Hull +44 20 3465 2749
Paul Kratz +44 20 3465 2678

BANKS

Adam Barrass +44 20 3207 7923
James Chappell +44 20 3207 7844
Andrew Lowe +44 20 3465 2743
Andreas Markou (EM) +44 20 3753 3022
Eoin Mullany +44 20 3207 7854
Peter Richardson +44 20 3465 2681
Jonathan Sharpe +44 20 3753 3031

BEVERAGES

Javier Gonzalez Lastra +44 20 3465 2719
Batuhan Karabekir (EM) +44 20 3465 2631
Adam Mizrahi +44 20 3465 2653

BUSINESS SERVICES, LEISURE & TRANSPORT

Roberta Claccia +44 20 3207 7805
Najet El Kassir +44 20 3207 7836
Stuart Gordon +44 20 3207 7858
Josh Puddle +44 20 3207 7881
Julia Winarso +44 20 3465 2627

CAPITAL GOODS

Sebastian Kuene +44 20 3207 7856
Philippe Lorrain +44 20 3207 7823
Rizk Maldi +44 20 3207 7806
Horace Tam +44 20 3465 2726
Simon Toennesen +44 20 3207 7819

EQUITY SALES

SPECIALIST SALES

AEROSPACE & DEFENCE

Bruna Zugliani +44 20 3207 7818

AUTOMOTIVE & THEMATICS

Chris Armstrong +44 20 3207 7809

BANKS & DIVERSIFIED FINANCIALS

Iro Papadopoulou +44 20 3207 7924

BUSINESS SERVICES, LEISURE & TRANSPORT

Rebecca Langley +44 20 3207 7930

CONSTRUCTION, CHEMICALS, METALS & MINING

James Williamson +44 20 3207 7842

CONSUMER STAPLES

Rupert Trotter +44 20 3207 7815

CONSUMER DISCRETIONARY

Victoria Maigrot +44 20 3753 3010

HEALTHCARE

Frazer Hall +44 20 3207 7875

MEDIA & TELECOMMUNICATIONS

Julia Thannheiser +44 20 3465 2676

SPECIAL SITUATIONS

Jeremy Grant +44 20 3207 7890

SALES

BENELUX

Miel Bakker +44 20 3207 7808
Martin de Laet +44 20 3207 7804
Alexander Wace +44 20 3465 2670

GERMANY

Michael Brauburger +49 69 91 30 90 741
Nina Buechs +49 69 91 30 90 735
André Grosskurth +49 69 91 30 90 734

CHEMICALS

Sebastian Bray +44 20 3753 3011
Andrew Heap +44 20 3207 7918

CONSTRUCTION

Lush Mahendrarajah +44 20 3207 7896
Robert Muir +44 20 3207 7860
Olivia Peters +44 20 3465 2646

ENERGY

Yuriy Kukhtanych (EM) +44 20 3465 2675

FOOD MANUFACTURING AND H&PC

Rosie Edwards +44 20 3207 7880
Yordana Mavrodieva +44 20 3207 7817
Fintan Ryan +44 20 3465 2748
James Targett +44 20 3207 7873

FOOD RETAIL

Batuhan Karabekir (EM) +44 20 3465 2631

GENERAL MID CAP - EU

Gunnar Cohrs +44 20 3207 7894
Martin Comtesse +44 20 3207 7878
Flavien Hias +44 20 3465 2693
Aymeric Lang +44 20 3753 3037
Anna Patrice +44 20 3207 7863
Benjamin Pfannes-Varrow +44 20 3465 2620
Simona Sarli +44 20 3207 7834
Julia Scheufler +44 20 3753 3016

GENERAL MID CAP - UK

Robert Chantry +44 20 3207 7861
Sam England +44 20 3465 2687
Ned Hammond +44 20 3753 3017
Benjamin May +44 20 3465 2667
Owen Shirley +44 20 3465 2731

GERMANY (cont'd)

Florian Peter +49 69 91 30 90 740
Joerg Wenzel +49 69 91 30 90 743

UK

Alexandra Clément +44 20 3753 3018
Fabian De Smet +44 20 3207 7810
Karl Hancock +44 20 3207 7803
Sean Heath +44 20 3465 2742
David Hogg +44 20 3465 2628
Peter Kaineder +44 20 3753 3062
James Matthews +44 20 3207 7807
David Mortlock +44 20 3207 7850
Eleni Papoula +44 20 3465 2741
Bhavin Patel +44 20 3207 7926
Richard Payman +44 20 3207 7825
Joanna Sanders +44 20 3207 7925
Mark Sheridan +44 20 3207 7802
George Smbert +44 20 3207 7911
Anita Surana +44 20 3207 7855
Paul Walker +44 20 3465 2632

FRANCE

Thibault Bourgeat +33 1 5844 9505
Alexandre Chevassus +33 1 5844 9512
Dailia Farigoule +33 1 5844 9510
Clémence Peyraud +33 1 5844 9521
Benjamin Voisin +33 1 5844 9507

SCANDINAVIA

Frederik Angel +44 20 3753 3055
Marco Weiss +49 40 350 60 719

GENERAL RETAIL

Conrad Bartos +44 20 3753 3053
Michelle Wilson +44 20 3465 2663

HEALTHCARE

Scott Bardo +44 20 3207 7869
Jakob Berry +44 20 3465 2724
Alistair Campbell +44 20 3207 7876
Graham Doyle +44 20 3465 2634
Klara Fernandes +44 20 3465 2718
Tom Jones +44 20 3207 7877
Joseph Lockey +44 20 3465 2730
Louise Pearson +44 20 3465 2747
Laura Sutcliffe +44 20 3465 2669

INSURANCE

Trevor Moss +44 20 3207 7893
Emanuele Musio +44 20 3207 7916
Iain Pearce +44 20 3465 2665
Sami Taipalus +44 20 3207 7866

LUXURY GOODS

Zuzanna Pusz +44 20 3207 7812

MEDIA

Robert Berg +44 20 3465 2680
Laura Janssens +44 20 3465 2639
Alastair Reid +44 20 3207 7841
Sarah Simon +44 20 3207 7830

METALS & MINING

Alessandro Abate +44 20 3753 3029
Fawzi Hanano +44 20 3207 7910
Yuriy Vlasov +44 20 3465 2674

SWITZERLAND, AUSTRIA & ITALY

Andrea Ferrari +41 44 283 2020
Carsten Kinder +41 44 283 2024
Gianni Lavigna +41 44 283 2038
Jamie Nettleton +41 44 283 2026
Benjamin Stillfried +41 44 283 2033

CRM

Louise Hughes +44 20 3753 3066
Jessica Jarmyn +44 20 3465 2696
Edwina Lucas +44 20 3207 7908
Greg Swallow +44 20 3207 7833

CORPORATE ACCESS

Lindsay Arnold +44 20 3207 7821
Jennie Jiriny +44 20 3207 7886
Stella Siggins +44 20 3465 2630

EVENTS

Laura Hawes +44 20 3753 3008
Suzy Khan +44 20 3207 7915
Charlotte Kilby +44 20 3207 7832
Natalie Meech +44 20 3207 7831
Ellen Parker +44 20 3465 2684
Sarah Weyman +44 20 3207 7801

SALES TRADING

HAMBURG
Tim Storm +49 40 350 60 415

PARIS

Vincent Klein +33 1 58 44 95 09
Antonio Scutto +33 1 58 44 95 03

REAL ESTATE

Kai Klose +44 20 3207 7888
Tina Munda +44 20 3465 2716

TECHNOLOGY

Jean Beaubois +44 20 3207 7835
Georgios Kertsos +44 20 3465 2715
Gal Munda +44 20 3465 2746
Tammy Qiu +44 20 3465 2673

TELECOMMUNICATIONS

Ondrej Cabejssek (EM) +44 20 3753 3071
Usman Ghazi +44 20 3207 7824
Siyi He +44 20 3465 2697
Laura Janssens +44 20 3465 2639
Paul Marsch +44 20 3207 7857
Michael Summerville +44 20 3207 7914

THEMATIC RESEARCH

Nick Anderson +44 20 3207 7838
Asad Farid +44 20 3207 7932

TOBACCO

Jonathan Leinster +44 20 3465 2645

UTILITIES

Robin Abrams +44 20 3465 2635
Andrew Fisher +44 20 3207 7937
Lawson Steele +44 20 3207 7887

ECONOMICS

Florian Hense +44 20 3207 7859
Carsten Hesse (EM) +44 20 3753 3001
Kallum Pickering +44 20 3465 2672
Holger Schmieding +44 20 3207 7889

LONDON

Mike Berry +44 20 3465 2755
Stewart Cook +44 20 3465 2752
Mark Edwards +44 20 3753 3004
Tristan Hedley +44 20 3753 3006
Peter King +44 20 3753 3139
Christoph Kleinasser +44 20 3753 3063
Chris McKeand +44 20 3207 7938
Simon Messman +44 20 3465 2754
AJ Pulley +44 20 3465 2756
Michael Schumacher +44 20 3753 3006
Paul Somers +44 20 3465 2753

EQUITY TRADING

HAMBURG

David Hohn +49 40 350 60 761
Gregor Labahn +49 40 350 60 571
Lennart Pleus +49 40 350 60 596
Marvin Schweden +49 40 350 60 576
Linus Weidner +49 40 350 60 798
Philipp Wiechmann +49 40 350 60 346
Christoffer Winter +49 40 350 60 559

LONDON

Edward Burlison-Rush +44 20 3753 3055
Richard Kenny +44 20 3753 3083

ELECTRONIC TRADING

Daniel Eichhorn +49 40 350 60 391
Matthias Führer +49 40 350 60 597

BERENBERG CAPITAL MARKETS LLC

Member FINRA & SIPC

E-mail: firstname.lastname@berenberg-us.com

EQUITY SALES

SALES

Kelleigh Faldi +1 617 292 8288
Isabella Fantini +1 646 445 4861
Shawna Giust +1 646 445 7216
Rich Harb +1 617 292 8228
Zubin Hubner +1 646 445 5572
Jessica London +1 646 445 7218
Ryan McDonnell +1 646 445 7214

SALES (cont'd)

Emily Mouret +1 415 802 2525
Peter Nichols +1 646 445 7204
Kieran O'Sullivan +1 617 292 8292

CRM

Laura Cooper +1 646 445 7201

CORPORATE ACCESS

Olivia Lee +1 646 445 7212
Tiffany Smith +1 646 445 4874

EVENTS

Patricia Ehrhart +1 646 445 4863

SALES TRADING

Christopher Kanian +1 646 445 5576
Lars Schwartz +1 646 445 5571
Brett Smith +1 646 445 4873
Bob Spillane +1 646 445 5574

ECONOMICS

Mickey Levy +1 646 445 4842
Roiana Reid +1 646 445 4865