

Accelerating the UK's energy efficiency finance market - the role of the Investor Confidence Project

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European Commission Disclaimer



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Europe's Climate and Energy Goals and Costs

- 2050 Roadmap Goals
 - 79-82% overall economy-wide GHG-reduction
 - 88-91% building sector GHG- reduction
- Costs
 - Building sector reductions will cost:
 - €3.5 trillion
 - €95 billion annually¹



1) *Europe's Buildings Under the Microscope*,
Building Performance Institute of Europe, 2011

Status report on EE financing

- Scale of market *potential* recognized ✓
- Co-benefits increasingly recognized ✓
- Growing interest from institutional investors ✓
- Slow development of the EE financing market – leading to frustration ✗

A healthy European energy efficiency market would have:

- Strong demand by owners and investors
- Highly skilled and accredited workforce
- A mix of financing products at attractive rates
- Standardized tools for tracking and quantifying savings
- Active secondary market



The Energy Efficiency Capital Gap

Projects

- Untapped Market Opportunity
- Healthy Returns
- Established Industry
- Excess Capacity

Investors

- Search for yield
- Risk/Return
- Growing emphasis on Impact Investing
- Growing interest in EE



UK market context

- UK homes and places of work are some of the oldest and traditionally constructed buildings in Europe
- Approximately 1.8 million non-domestic premises and 5.6 million flats in the UK (lowest in Europe excluding Ireland and Norway)
- Energy efficiency has become a political priority due to energy prices and fuel security concerns
- There is over 80 TWh of outstanding cost-effective energy efficiency potential in this sector, mainly in non-domestic buildings
- UK energy efficiency market is worth more than £18 billion annually, and employs 136,000 people

Top 5 UK market trends

1. Minimum Energy Performance Standards choice editing worst performing stock from 2018
2. Green Deal policy designed to provide financed retrofit works (additional incentives required!)
3. UK Green Investment Bank providing pari-passu lending for energy efficiency programmes through specialist fund managers
4. Growth of national and regional refurbishment programmes e.g. SALIX, RE:FIT and RE:NEW and CEF
5. Energy Saving Obligation Scheme (ESOS) requiring mandatory audits for large businesses by 5th December 2015

The Main Barriers Today



“From a financier's perspective, energy efficiency projects entail **high transaction costs** and are perceived to be **risky** due to the **difficulty of predicting accurately energy cost savings**. Sufficient experience with underwriting energy efficiency loans and **standardized evaluation methods for measuring and verifying energy savings** is still lacking. The **lack of secondary markets** to provide exit opportunities for investors, or further liquidity to the investments is another important barrier.”

— JRC Science and Policy Report, *Financing Building Energy Renovations* (2014), Marina Economidou and Paolo Bertoldi

Citigroup conclusions

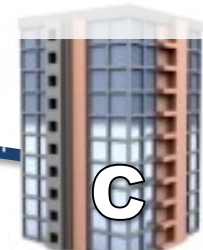
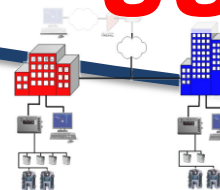
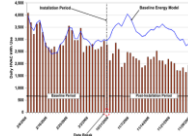
Energy efficiency is in a category by itself. With the exception of one company packaging energy efficiency, **energy efficiency projects do not yet meet the requirements of capital markets.** The industry is just too disaggregated. **No two projects or contracts are alike.** Securitization is not practical or possible under these circumstances. **Say you have 1,000 energy efficiency projects, Standard & Poor's would have to read 1,000 documents to assess the risk.** Fees won't pay for that level of review.

Michael Eckhart

Managing Director & Global Head of Finance and
Sustainability at Citigroup

Lack of Standardization = Greater Risk

Greater performance risk
Higher transaction costs
Cannot build capacity
Cannot aggregate



Standardization Drives Finance



Energy Efficiency
Financial Institutions Group

Table 3: EEFIG ranking of key drivers affecting supply of energy efficiency investment by market segment.

Buildings Sector	Commercial	Public	Public Rental	Owner Occupied	Private Rental	Average Rank
Standardization	3	1	1	1	2	1.6
Regulatory Stability	1	4	2	4	3	2.8
Increased Investor Confidence & Change in Risk Perception	2	5	7	5	4	4.6
Transaction costs / simplicity	7	10	6	2	1	5.2
Measurement, Reporting & Verification (MRV) and Quality Assurance	4	2	4	10	8	5.6

Table 2: EEFIG ranking of key drivers affecting demand for energy efficiency investment by market segment.

Buildings Sector	Commercial	Public	Public Rental	Owner Occupied	Private Rental	Average Rank
Standardization	6	3	1	11	2	4.6
Clear Business Case	1	7	9	9	4	6
Effective enforcement of regulation	4	6	6	8	6	6
Awareness at Key Decision Maker Level & Leadership	2	2	2	12	13	6.2

Energy financing



**Standardized
Mainstream
Large volume
Multiple sources**



**Standardized
Mainstream
Large volume
Multiple sources**



**NOT standardized
NOT mainstream
SMALL volume
FEW sources**



Investor Confidence Project

Addressing the barriers

Investor Confidence Project Europe

- **Our Mission** is to enable a market for investment in quality energy efficiency projects by reducing transaction costs and engineering overhead, while increasing the reliability and consistency of savings.
- **Background**
 - Provide **open source** tools and resources to help all energy efficiency market participants to improve project performance and investment attractiveness
 - European Commission and private investor funded
 - Broad participation from investors, engineers, programs, energy service companies, and building owners
 - Builds on 4 years of work in North America

Investor Confidence Project Outcomes

Increase deal-flow

- Increase confidence in savings
- Reduce transaction costs
- Streamline origination process



Reduce risk and cost

- Develop data to manage performance
- Attract project finance investors
- Enable portfolios and securitization
- Reduce cost of capital



Initial Focus: North America and Europe

Key Strategies

1. Create the tools to standardize the market
2. Take the tools to market through partnerships
3. Be a catalyst for scale

Programs like the Investor Confidence Project will “facilitate a global market for financings by institutional investors that look to rely on standardized products.”

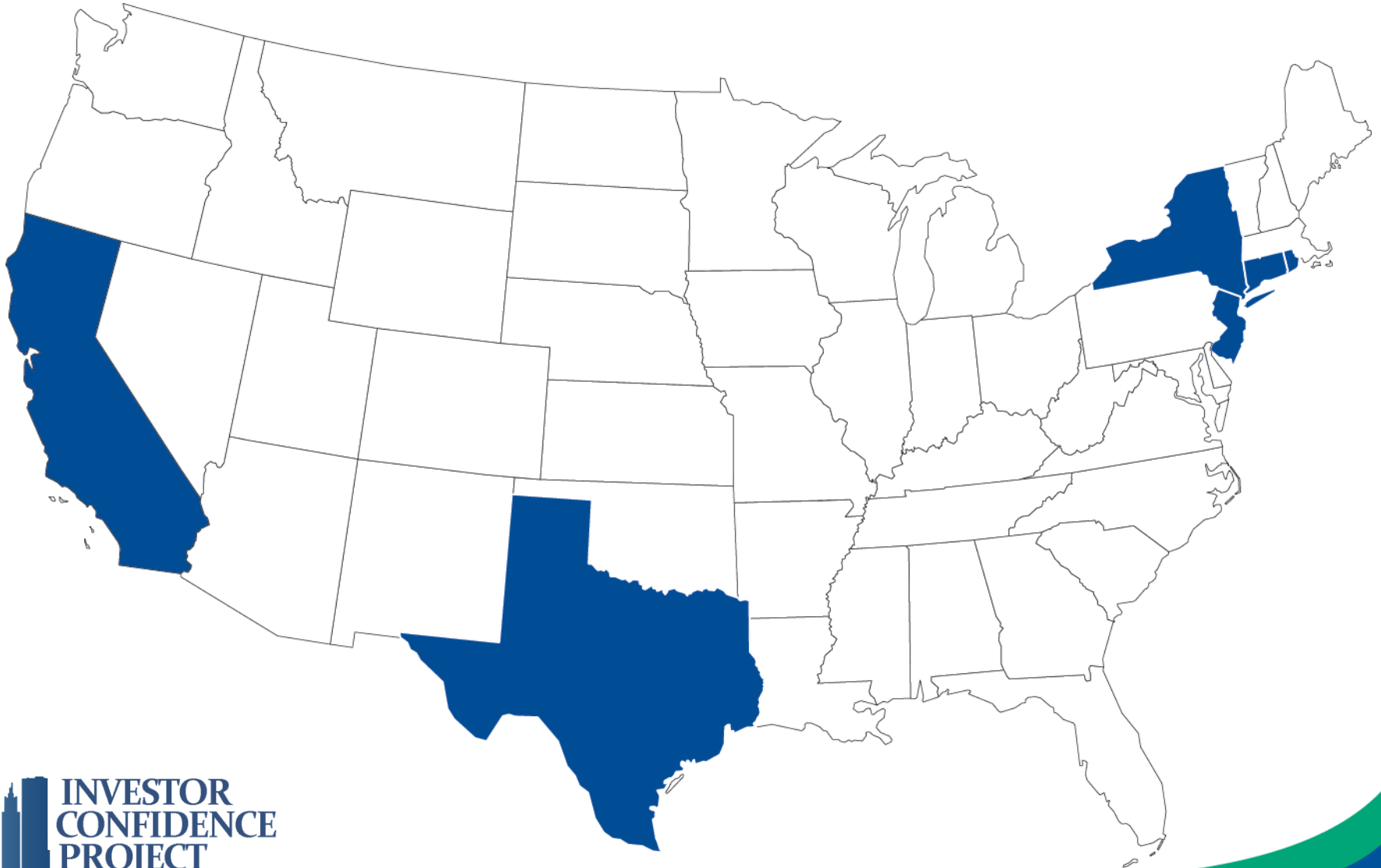
– *International Energy Agency*

[Recommends creation of an] “EU Investor Confidence project supporting standard processes and open-source energy usage database”

– *Energy Efficiency Financial Institutions Group*

ICP North American Market Momentum

1/3 of GDP and 27% of population



ICPEU structure

Europe Steering Group

- Advises ICP Europe staff on program development and deployment
- Ensures that products and services are market-ready & industry-relevant

Ally Network

- Publicly support the ICP Protocols as a standard approach to engineering Investor Ready Energy Efficiency projects
- Benefit from informal networking among other market leaders and investors

Technical Forum

- Industry-leading technical advisory group
- Assists in the development and maintenance of Energy Performance Protocols

National Steering Group

- Dissemination of the project concept and results
- Ensuring adoption of the Protocols within the country.

ICP Europe Steering Group

ARUP



Department
of Energy &
Climate Change



EuroACE
THE EUROPEAN ALLIANCE OF COMPANIES
FOR ENERGY EFFICIENCY IN BUILDINGS



Green
Investment
Bank



SIEMENS



e.on

CLIMATE & STRATEGY
PARTNERS

European Ally Network Members

EMVC Solutions

CLIMATE & STRATEGY
PARTNERS



SIEMENS



British Energy Efficiency Federation



Green Investment Bank



HUBER DIXON INSURANCE SERVICES LTD



powered by eon



Investor Confidence Project Europe

CREATE TOOLS

- Protocols
- Accreditation
- Labels
- Open data

TAKE TOOLS TO MARKET

- Private investors
- Public programmes
- Developers
- Property owners
- Utilities

BE A CATALYST FOR CHANGE

- Inspire action
- Connect projects to capital
- Create working examples

2015

Key Strategy 1: Developing the tools



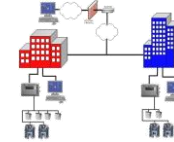
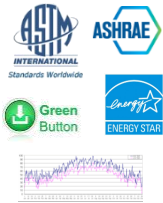
Investor Confidence Project

Key Strategies

1. Create the tools to standardize the market

- *Shared protocols* based on existing (but varied) engineering standards
- *Accreditations* that work across markets
- *Labels* to easily identify “investor-ready” projects
- *Open data* infrastructure, to empower new entrants

ICP Energy Performance Protocols



BASELINING

- Existing Building
- Drawings
- Weather File
- Energy Usage
- Energy Rates
- Occupancy

SAVINGS

- Model File
- Calibration Data
- Bid Packages
- Certifications

COMMISSION

- Cx Plan
- Cx Authority
- Test Procedures
- Facilities Req.

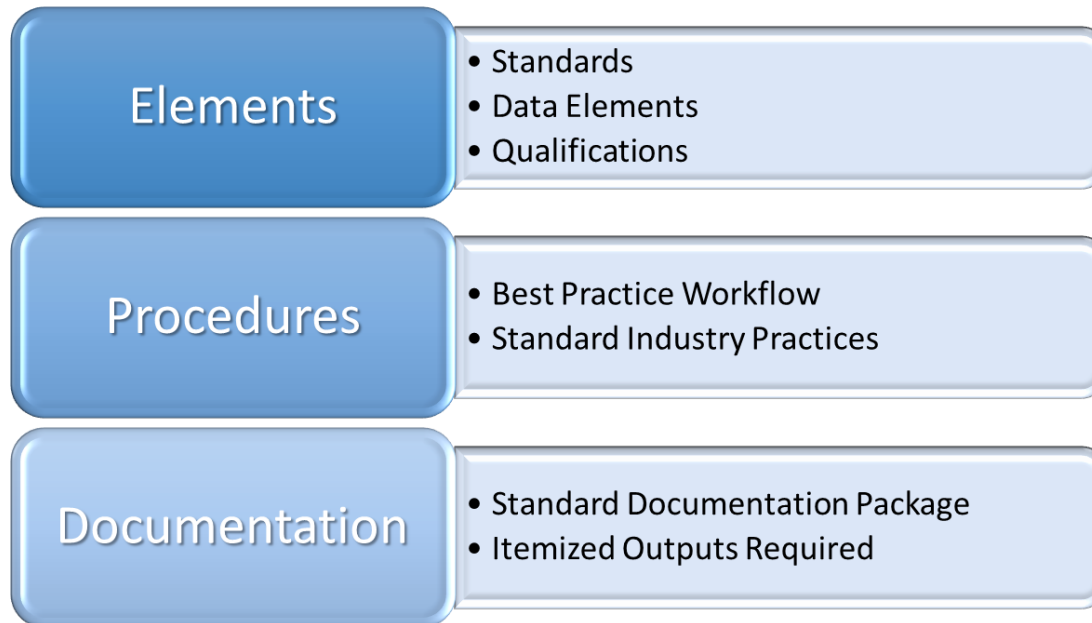
OPERATIONS

- BMS Points
- Fault Plan
- Maintenance Plan

MEASUREME

- M&V Model
- Regression Model
- Adjustments
- Impact
- Baseline Adjustments

Energy Performance Protocol Framework



ICP European Protocols

- Build 6 protocols based on European and National standards by February 2016
 - 3 for Non-domestic buildings (Large: over €1 million, Standard, Targeted)
 - offices;
 - educational buildings;
 - hospitals;
 - hotels and restaurants;
 - sports facilities;
 - wholesale and retail trade services buildings;
 - 3 for Apartment Blocks (Large: over €1 million, Standard, Targeted)

ICP Protocol Development

Organize market leaders to provide input into the development of the protocols

- Financiers
- Building owner groups
- Developers, installers, ESCOs
- Government agencies
- Utilities



INVESTOR READY ENERGY EFFICIENCY TM



Project
Development
and Engineering



Project
Lifecycle
Management



Third Party
Verification




Project Development Specification

- Integrated with protocols
- Detailed coverage of topics, methods, best practices
- Comprehensive and interactive resource list



Key Strategy 2: Taking the tools to market



Investor Confidence Project

Key Strategies

2. Take the tools to market through partnerships

- *Governments*: mayors, national agencies, “green banks” and the European Commission
- *Private sector*: engineering firms, ESCOs, real estate portfolios, developers, banks, other investors, and potential new entrants
- *Utilities*: forward-thinking utilities and energy providers

ICP Tools to Market Partnerships

- **Demand-side protocol adoption and technical assistance**
 - Investors and banks
 - Owners
 - Government and utility programmes
- **Supply-side capacity building**
 - Developers and contractors
 - Quality assurance agents
- **Market activation**

SF Inter-connect event
November 2014



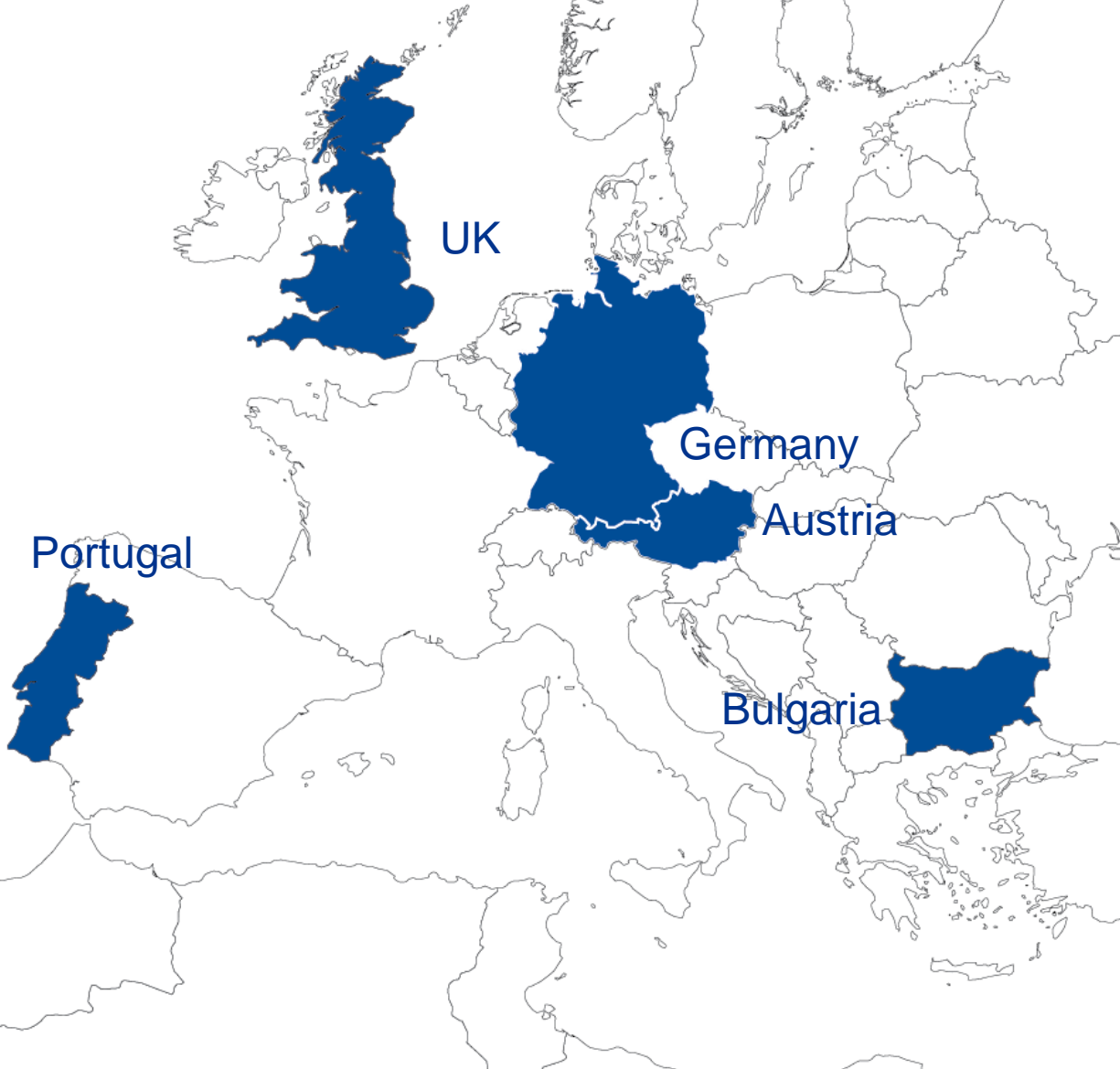
Assistance to Demand-Side

- **Incorporate protocols into diligence for active investors and owners**
 - Institutional investors (Cassie de Depots, Deutsche Bank Wealth)
 - Private banks (ING, Deutsche Bank)
 - Public banks (EIB, Green Investment Bank, KfW)
 - Owners and Asset Managers (British Property Federation)
- **Assist public renovation programs move to market**
 - Covenant of Mayors
 - Energy efficiency obligation (16 countries)
 - Utilities (E.ON, EDF)

Supply-Side Assistance

- **Adoption of protocols by supply chain**
 - Developers (ARUP, Siemens, Schneider, eu.ESCO)
 - Quality assurance agents (EVO, DNV GL)
 - Contractors (REHVA, British Energy Efficiency Federation)
 - Manufacturers (EuroACE, PU.Europe)

Focus on Five Countries to Launch ICP Europe



In-country advocates



Verco



**PLUS ULTRA
ASSET
MANAGEMENT**



RdA
CLIMATE SOLUTIONS



denkstatt
sustainable thinking



denkstatt
sustainable thinking

National in-country advocate activities

- **Form national steering groups of key stakeholders**
- **Adapt and translate protocols**
- **Identify key programs for protocol adoption**
- **Capacity- and market-building**
 - Technical assistance to renovation programs
 - Training for developers and quality assurance agents

Key Strategy 3: Catalyst for scale



Investor Confidence Project

Key Strategies

3. Be a catalyst for scale

- *Inspire others* through strong communications and marketing of success
- *Connecting projects* to capital markets
- *Create high visibility examples* of a healthy efficiency market by bringing pieces together

Energy financing – the future



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Mainstream
Large volume
Multiple sources**



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Thank you

The Partnerships, People, and
Resources to tap Global
Capital Markets

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