





North Carolina Supplemental Retirement Board of Trustees

Patrick Vatel, Head of Asset Owners Americas Segment, Asset Servicing

December 2019

Agenda

- BNY Mellon Business Overview
- BNY Mellon Asset Servicing Overview
- Our Relationship

BNY Mellon Business Overview 3rd Quarter 2019

Our Business (as of September 30, 2019)

Founded in 1784, BNY Mellon is leading the financial industry in Investment Management and Investment Services



A Seamless and Connected Set of Capabilities

- Design and deliver innovative solutions for managing and servicing investments
- Combine a wide range of investment capabilities into comprehensive solutions
- Provide direct access to opportunities in markets around the world

See important disclosures and disclaimers in Appendix (Footnotes 1,2,3,4,5).

BNY Mellon: Financial Highlights

Revenue and Income

Nine months ended Sept 30, 2019

\$9.3 billion

Total fee and other revenue

\$2.4 billion

Net interest revenue

\$11.7 billion

Total revenue

\$2.9 billion

Net income applicable to common shareholders

Assets and Market Cap

At Sept 30, 2019

\$373.2 billion

Total assets

\$41.1 billion

Total shareholders' equity

\$41.7 billion

Market capitalization

Key Ratios¹²

At Sept 30, 2019

11.1%

CET 1 ratio

13.2%

Tier 1 capital ratio

14.0%

Total capital ratio

81%

Fee revenue ratio

The Bank of New York Mellon – Credit Ratings¹³ (As of September 30, 2019)

We have consistently received ratings that are among the highest in the financial services industry from all four major credit rating agencies and for key credit categories.

Credit Category	Moody's	S&P	Fitch	DBRS
Long-term deposits	Aa1	AA-	AA+	AA
Long-term senior debt	Aa2	AA-	AA	AA
Subordinated debt	Not Rated	А	Not Rated	Not Rated
Short-term deposits	P-1	A-1+	F1+	R-1 (high)
Commercial paper	P-1	A-1+	F1+	R-1 (high)
Outlook	Stable	Stable	Stable	Positive

See important disclosures and disclaimers in Appendix (Footnotes 12,13).



Asset Servicing Overview

BNY Mellon is Trusted by Asset Owners Worldwide

Benefit from the global reach, stability and resources of a G-SIFI

Asset Servicing

\$35.8 Trillion

Assets under custody and/or administration¹

>\$24 Trillion

Assets on data management platform²

\$12.7 Trillion

Assets under measurement²

>900

Institutional investors²

\$742 Million

Annual asset servicing technology reinvestment²

\$2.93 Trillion

Subaccount Positions²

\$1.7 Trillion

Average USD cleared per day²

~8MM

NAVs in 2018²

~106MM

Settlements processed in 2018²

Asset Owners

795 Asset Owner clients

Representing \$4T in assets⁴

346 Corporate clients

Representing \$1.4T in assets⁴

115 Public clients

Representing \$1.7T in assets⁴

372 Defined Benefit (DB) clients

Representing \$2.3T in assets⁴

57 Defined Contributions (DC) clients

representing \$401B in assets4

233 Endowments & Foundations clients

Representing \$604B in assets⁴

#1 AUC/A

World's largest custodian³

87% of the Top 100

U.S. Pension and Employee Benefit Funds⁵

96% of the Top 50

Life/Health Insurance Companies⁶

40% of the Top 50

U.S. Endowments⁷

28% of the Top 50

U.S. Foundations⁷



¹ BNY Mellon internal data as of 9/30/19

² BNY Mellon internal data as of 3/31/19

³ Global Investor, 2018

⁴ As of 6/30/18

⁵ Pensions & Investments, P&I Crain Communications Inc. ©2019

⁶ A.M. Best, A.M. Best Company, Inc. ©2019

⁷ As of 12/31/18

Our Relationship

North Carolina Supplemental Retirement Income Plans (NCSRP) – Client Profile

Custodian for:

- The Supplemental Retirement Income Plan
- North Carolina Public Employee Deferred Compensation Plan

Total Market Value: \$12.4 Billion (as of 10/31/2019)

Services Provided:

- Domestic and Global Custody
- Global Institutional Accounting
 - Daily and Monthly Valuation
 - Provide Daily Unit Values to the Administrator (Prudential)
 - Unitization
 - Reconciliation with Investment Managers
 - Work with Client on Asset Reallocation and White Label Fund Rebalancing
- Income Collection
- Corporate Action Processing
- Tax Reclaim Processing
- Cash Sweep

- Foreign Exchange
- NEXEN Reporting
- Global Risk Solutions
 - Daily Performance for Fund Option Accounts and Monthly Performance for All Accounts
 - Daily and Monthly Analytics for Separate Accounts
 - Monthly and Look Through Analytics for Line Item Accounts
 - Daily Compliance Monitoring for Separate Accounts
 - Monthly Compliance Monitoring for Commingled Fund Accounts
 - Blended Benchmarks

International Markets – NCSRP in 2019

- Australia
- Austria
- Belgium
- Brazil
- Canada
- Chile
- China
- Colombia
- Czech Republic
- Denmark
- Egypt

- Finland
- France
- Germany
- Greece
- Hong Kong
- Hungary
- India
- Indonesia
- Ireland
- Israel
- Italy

- Japan/JBG
- Mexico
- Morocco
- Netherlands
- New Zealand
- Norway
- Peru
- Philippines
- Poland
- Portugal
- Qatar

- Singapore
- South Africa
- South Korea
- Spain
- Sweden
- Switzerland
- Taiwan
- Thailand
- Turkey
- UAE
- UK

Open Items Log for NCSRP (as of November 22, 2019)

BNY Mellon has created a process to effectively track open items identified by the BNY Mellon service team and North Carolina SRP

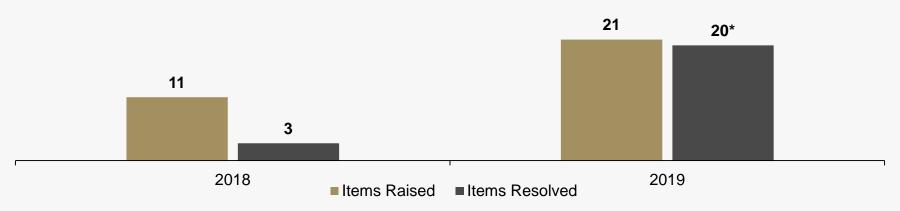
- The NCSRP Open Items Log was created in October 2018, and has been ongoing every month
- Areas of business covered include: Client Service, Tax Reclaims, Global Institutional Accounting (GIA),
 Global Risk Solutions (GRS), and Global Documentation, among others
- Full BNY Mellon team and NCSRP team representation on each monthly call

North Carolina SRP Log Dashboard						
Open Items		Actions / Items Closed				
Total Number of		Total Number of				
Action Items		Action Items Closed				
8		23				
Criticality		Criticality				
2	Low	2	Low			
2	Medium	7	Medium			
4	High	14	High			

Factors considered for each Action Item: □ Priority (defined by NCSRP) □ Description of the item □ BNY Mellon and NCSRP Owners □ Status (In Process, On Hold, Pending Close) □ Target Date/Party responsible for next step □ Comments/Updates

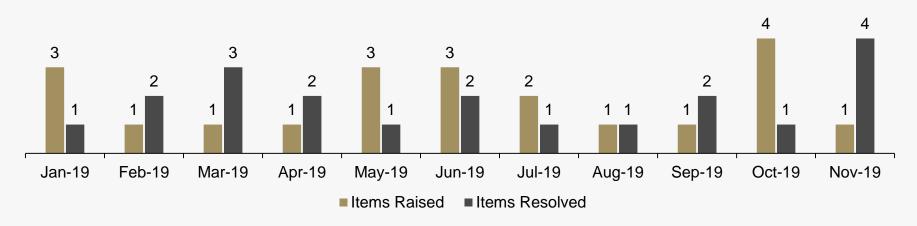
Open Items Log Statistics for NCSRP (as of November 22, 2019)

Number of Items Raised and Resolved by Year



^{*} Items Resolved in 2019 include resolved outstanding items from 2018

Number of Items Raised and Resolved by Month in 2019



BNY Mellon Service Team for NCSRP – Responsibilities

RELATIONSHIP MANAGEMENT

- Serve as business ally
- Ensure client satisfaction
- Understand strategic planning
- Provide product/service updates
- Responsible for fee re-negotiation

SERVICE COORDINATION

- Primary daily contact and point of escalation for service issues
- Coordinate monthly/quarterly calls with client and BNY Mellon team, as well as ad-hoc meetings upon client request
- Primary contact for negotiations and execution of legal documents
- · Coordinate client workbench training
- Monitor unique contractual requirements
- Maintain client specific documentation

GLOBAL CLIENT ADMINISTRATION

- Assist with new account opening process
- Account maintenance including account closing
- Maintenance of Account Chart
- · Establish new Workbench IDs

ASSET REALLOCATION EVENTS

- Assist client with completion of the Asset Reallocation Form (AFR)
- Manage the asset event with all the internal and external functional partners
- Maintain client documentation and records for auditing purposes

GLOBAL INSTITUTIONAL ACCOUNTING

- Accounting and valuation monthly/daily
- Manager reconciliation
- Ledger and financial statements
- Regulatory Support
- Line Item Processing (hedge fund, commingled)

PRIVATE INVESTMENT ACCOUNTING & ADMINISTRATIVE SERVICES

- Private Equity Portfolio valuations
- Liaison with General Partners

CLIENT CUSTODY SERVICES

- Also known as the Investment Support Services Group, CCS provides a dedicated team to apprise managers of:
- Their portfolio's trading status
- Daily short-term investment balances
- Cash forecasting
- Up-coming account activity
- Handle manager queries concerning custody trade related questions / inquiries

GLOBAL RISK SOLUTIONS

- Monthly Performance Processing
- Risk Analytics / Pooled Fund Look Through
- Charts/Universes Comparison
- Attribution Analysis
- NEXEN Training
- Compliance Monitoring

CASH

- Provide support for all incoming/outgoing cash activity:
 - Process outgoing client activity via Instruction Capture (IC)
 - Process client activity instructed via Fax/Standard Forms (outgoing wires for fee payments, fund investments, capital calls), Foreign Exchanges, Mutual Fund activity, cash movements in/out client DDA
- Monitor control reports throughout the day to ensure timely and accurate processing
- · Support for cash related inquires
- NEXEN Instruction Capture and custody report support

GLOBAL CLIENT DOCUMENTATION

Centralized team supporting all required local market documentation

SECURITIES LENDING

- · Marking to market
- · Collecting dividends and interest
- Tracking investments
- · Collecting interest on investments
- Charging borrower fees
- Paying borrower rebates
- Controlling delivery and return of loans and collateral
- Providing timely and accurate client reporting
- Disbursing earnings to clients as applicable
- Maintaining lending, investment, operations and client service systems



Accomplishments for Our Relationship in 2019

Client Service/Administrative

- Best Practice Review
- BNY Mellon Invoicing
 - Updates to KPIs and Scorecard
 - Timely production of invoices

Accounting

- 100% accuracy on NAV calculations sent to Prudential
- 100% distribution of Audited Statements by second business day
- Met monthly standards of on-time reporting for the last 12 months to Prudential

Global Custody

- Tax Reclaims
 - All-encompassing reclaim overview
- Hong Kong Connect
 - Successful negotiation of contract and fee addendum and implemented

Global Risk Solutions

- BNY Mellon/Factset Feed established
- Monthly Blended Benchmarks

Top 2020 Priorities for Our Relationship

Client Service/Administrative

- Amendment No. 4 to the Master Custodian Agreement
- Best Practice Review Implementation of changes
- Instruction Capture (NEXEN IC)
 - Automation of trade instructions, reducing the risks associated with faxing

Accounting

- Accurate and timely processing of the Quarterly Goal Maker rebalancing
- Continued accuracy and timeliness around NAV valuation and distribution
- High Responsiveness from all BNY Mellon teams to client inquiries

Tax Reclaim

- Tax Reclaim Dashboard via NEXEN
 - Currently in testing phase
- Expand Reclaim Service
 - Regular review of required tax documentation



Appendix

Our Capabilities

Expertise Throughout the Investment Lifecycle

- CORPORATE TRUST
- BNY MELLON MARKETS
- DEPOSITARY RECEIPTS

We restructure assets to support your changing financial needs.

- INVESTMENT MANAGEMENT
- BNY MELLON MARKETS
- PERSHING**

We distribute* assets to deploy your capital more efficiently.

- INVESTMENT MANAGEMENT
- PERSHING**
- WEALTH MANAGEMENT

We manage assets to support your specific investment goals.



- CORPORATE TRUST
- DEPOSITARY RECEIPTS
- BNY MELLON MARKETS

We create assets to provide access to capital.

- CLEARANCE & COLLATERAL MANAGEMENT
- BNY MELLON MARKETS
- PERSHING**
- TREASURY SERVICES

We trade* assets to enable you to seize new opportunities.

- ASSET SERVICING
- BNY MELLON MARKETS
- PERSHING**
- WEALTH MANAGEMENT

We hold and service assets to help keep investments secure.

^{*}Securities transactions are effected, where required, only through registered broker-dealers.

^{**} See important disclosures and disclaimers in Appendix (Footnote 11)

Our Clients

Institutions and Individuals⁶











Institutions	Asset Managers	Financial Services	Public/Non-Profits	Individuals
Corporations Governments Central Banks Family Offices Sovereign Funds	Mutual Funds Hedge Funds Private Equity ETFs	Banks Broker-Dealers Financial Intermediaries Insurance Companies Investment Advisors	Pension Funds Local Governments Endowments Foundations Charitable Gift Programs	High-Net-Worth Individuals and Families

76%

of Fortune 500 Companies 89%

of the Top 100 U.S. Broker-Dealers 95%

of the Top 100 Investment Managers Worldwide **87%**

of the Top 100 U.S. Pension and Employee Benefit Funds 96%

of the Top 50 Life/Health Insurance Companies 94%

of the Top 100 Banks Worldwide

See important disclosures and disclaimers in Appendix (Footnote 6).

Our Presence



Global Service, Local Delivery

- Powered by the collaborative and collective efforts of approximately 48,600 people around the world
- Seamless global network for cross-border speed, convenience and reliability
- · Our experts are located in-market and on-the-ground for close collaboration with clients

Full-time employees as of September 30, 2019.



Asset Servicing Digital Strategy

Our goal is to accelerate information delivery, transform client oversight and transparency and provide insights based on data and analytics – helping clients to harness the power of data



Accelerate Information Delivery

- System to system data interactions via APIs
- Intraday reporting of positions, cash, transaction and holdings data from core services
- Enhanced reporting



Enhance Client Oversight & Transparency

- Pan-asset performance and exposure analysis
- Workflow for private markets capital calls and distribution
- Instruction capture and document management
- New account and market opening workflow



Deliver Data and Analytics Solutions

- Integrated data solutions to benchmark asset allocations across peer universe and ESG criteria
- Digital solutions ecosystem (including third-party solutions)
- Exploring distributed ledger solutions to re-invent core service delivery

Our Model is Built the Way you Want to do Business

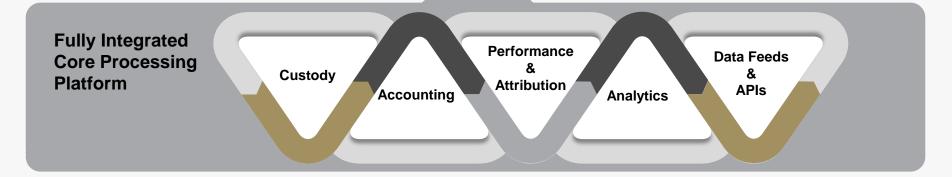
Delivery Channels NEXEN Portal NEXEN Platforms NEXEN Platforms

Key Features

- Mobile-friendly portal with consistent user experience
- Customizable and intuitive reporting



- Multiple delivery channels and file formats
- Flexibility of choice for front office vs. vertically siloed solutions



Our Strategic Partnerships Continue to Grow in Number and Significance







Venn is a portfolio risk tool that delivers quantitatively driven portfolio analysis and optimization capabilities to perform risk and return analysis in portfolio construction.

Caissa is a pan-asset class reporting and analytics platform with flexible risk and performance analytics, attribution, portfolio transparency and liquidity analysis.

Kingfield will streamline client service inquiries through a standardized network, eliminating inefficiencies and the need for bespoke communication channels.

BLACKROCK SOLUTIONS

Client access to BNY Mellon's data and analytical workflow tools directly through BlackRock's Aladdin platform.

Bloomberg

Client access to BNY Mellon's data and analytical workflow tools directly through Bloomberg AIM.

EZOPS

EZOps is an artificial intelligence-based reconciliation and data control solution aimed at better serving clients' complex data needs.

Disclosures and Disclaimers

- 1. Preliminary. Excludes securities lending cash management assets and assets managed in the Investment Services business.
- 2. Preliminary. Includes the AUC/A of CIBC Mellon Global Securities Services Company ("CIBC Mellon"), a joint venture with the Canadian Imperial Bank of Commerce, of \$1.4 trillion at Sept 30, 2019.
- 3. Preliminary. Includes AUM and AUC/A in the Wealth Management business.
- 4. Willis Towers Watson, October 30, 2018. Based on discretionary assets under management at the end of 2017; does not include saving/current accounts or assets unrelated to investment business, money market funds, advisory portfolios, or transactional assets. Analysis based on data supplied by third parties in U.S. dollars.
- 5. Pensions & Investments, May 2019. Rankings based on a survey of more than 580 investment management firms that provided information in response to an online survey. In order to qualify for inclusion the firm must manage assets for US institutional tax-exempt clients. Ranked by total worldwide institutional assets under management as of 12/31/2018.
- 6. Fortune 500: Fortune, Time Inc. ©2018; Broker-Dealers: Investment News, InvestmentNews LLC ©2019; Investment Managers, Pensions and Employee Benefits: Pensions & Investments, P&I Crain Communications Inc. ©2019; Life and Health Insurance Companies: A.M. Best, A.M. Best Company, Inc. ©2019; Banks: relbanks.com, Relbanks.com ©2011-2018; BNY Mellon client data as of December 2018.
- 7. SIPC insurance is not the same as, and should not be confused with, FDIC insurance. Investment products (other than deposit products) referenced in this brochure (including money market funds) are not insured by the FDIC (or any other state or federal agency), are not deposits of or guaranteed by BNY Mellon or any bank or non-bank subsidiary thereof, and are subject to investment risk, including the loss of principal amount invested.
- 8. Investment Boutiques: The Alcentra Group refers to the affiliated companies Alcentra, Ltd and Alcentra NY, LLC. Dreyfus Cash Investment Strategies (CIS) is a division of BNY Mellon Securities Corporation. Investment advisory services in North America are provided through four different investment advisers registered with the Securities and Exchange Commission (SEC), using the brand Insight Investment: Cutwater Asset Management Corp. (CAMC), Cutwater Investor Services Corp. (CISC), Insight North America LLC (INA) and Insight Investment International Limited (IIL). The North American investment advisers are associated with other global investment managers that also (individually and collectively) use the corporate brand Insight Investment and may be referred to as "Insight" or "Insight Investment".• Newton and/or the Newton Investment Management brand refers to the following group of affiliated companies: Newton Investment Management (North America) Limited (NIMNA Ltd) and Newton Investment Management (North America) LLC (NIMNA Ltd) and Newton Investment Management (North America) LLC (NIMNA Ltd) and Newton Investment Management (North America) LLC (NIMNA Ltd) and Newton Investment Management (North America) LLC (NIMNA Ltd) and Newton Investment Management (North America) LLC (NIMNA Ltd) and Newton Investment Management (North America) LLC (NIMNA Ltd) and Newton Investment Management (North America) LLC (NIMNA Ltd) and Newton Investment Management (North America) LLC (NIMNA Ltd) and Newton Investment Management (North America) LLC (NIMNA Ltd) and Newton Investment Management (North America) LLC (NIMNA Ltd) and Newton Investment Management (North America) LLC (NIMNA Ltd) and Newton Investment Management (North America) LLC (NIMNA Ltd) and Newton Investment Management (North America) LLC (NIMNA Ltd) and Newton Investment Management (North America) LLC (NIMNA Ltd) and Newton Investment Management (North America) LLC (NIMNA Ltd) and Newton Investment Management (North America) LLC (NIMNA Ltd) and Newton Invest
- 9. The value of investments and the income from them is not guaranteed and can fall as well as rise due to stock market and currency movements. When you sell your investment you may get back less than you originally invested.
- 10. Wealth Management Services: Consumer credit services, which are subject to application and credit approval, and banking services are provided by BNY Mellon, N.A., member FDIC. Commercial credit services, which are subject to application and credit approval, may be provided by The Bank of New York Mellon or BNY Mellon, N.A. Mortgage services are subject to credit approval and are provided by BNY Mellon, N.A. BNY Mellon is an equal housing lender. Brokerage services are provided by BNY Mellon Wealth Management Direct, a division of BNY Mellon Securities Corporation. BNY Mellon Securities Corporation is a dually registered investment advisor/broker-dealer and member FINRA and SIPC and is a wholly-owned subsidiary of The Bank of New York Mellon Corporation.
- 11. Pershing is the umbrella name for Pershing LLC (member FINRA, SIPC and NYSE), Pershing Advisor Solutions (member FINRA and SIPC), Pershing Prime Services (a part of Pershing LLC), Pershing Limited (UK), Pershing Securities Limited, Pershing Securities International Limited (Ireland), Pershing (Channel Islands) Limited, Pershing Securities Canada Limited, Pershing Securities Singapore Private Limited and Pershing Securities Australia Pty. Ltd. SIPC protects securities in customer accounts of its members up to US\$500,000 in securities (including US\$250,000 for claims for cash). Explanatory brochure available upon request or at www.sipc.org. SIPC does not protect against loss due to market fluctuation.
- 12. Preliminary. For our CET1, Tier 1 capital and Total capital ratios, our effective capital ratios under the U.S. capital rules are the lower of the ratios as calculated under the Standardized and Advanced Approaches, which for the periods noted above was the Advanced Approaches.
- 13. A security rating is not a recommendation to buy, sell or hold securities. The rating may be subject to revision or withdrawal at any time by the assigning rating organization. Each rating should be evaluated independently of the other ratings.



Disclosures and Disclaimers

BNY Mellon is the corporate brand of The Bank of New York Mellon Corporation and may be used as a generic term to reference the corporation as a whole and/or its various subsidiaries generally. This material and any products and services may be issued or provided under various brand names in various countries by duly authorized and regulated subsidiaries, affiliates, and joint ventures of BNY Mellon, which may include any of the following. The Bank of New York Mellon, 240 Greenwich St, New York, New York 10286 USA, a banking corporation organized pursuant to the laws of the State of New York, and operating in England through its branch at One Canada Square, London E14 5AL UK, registered in England and Wales with numbers FC005522 and BR000818. The Bank of New York Mellon is supervised and regulated by the New York State Department of Financial Services and the US Federal Reserve and authorized by the Prudential Regulation Authority. The Bank of New York Mellon, London Branch is subject to regulation by the Financial Conduct Authority and limited regulation by the Prudential Regulation Authority. Details about the extent of our regulation by the Prudential Regulation Authority are available from us on request. The Bank of New York Mellon SA/NV, a Belgian public limited liability company, with company number 0806.743.159, whose registered office is at 46 Rue Montoyerstraat, B-1000 Brussels, Belgium, authorized and regulated as a significant credit institution by the European Central Bank (ECB), under the prudential supervision of the National Bank of Belgium (NBB) and under the supervision of the Belgian Financial Services and Markets Authority (FSMA) for conduct of business rules, a subsidiaries, affiliates, affiliates

The Bank of New York Mellon SA/NV (London Branch) is authorised by the ECB and subject to limited regulation by the Financial Conduct Authority and the Prudential Regulation Authority are available from us on request. The Bank of New York Mellon (International) Limited is registered in England & Wales with Company No. 03236121 with its Registered Office at One Canada Square, London E14 5AL. The Bank of New York Mellon (International) Limited is authorised by the Prudential Regulation Authority and regulated by the Financial Conduct Authority and the Prudential Regulation Authority. The Bank of New York Mellon SA/NV, operating in Ireland through its branch at Riverside II, Sir John Rogerson's Quay, Grand Canal Dock, Dublin 2, D02KV60, Ireland, trading as The Bank of New York Mellon SA/NV, Dublin Branch, which is authorised by the ECB, regulated by the Central Bank of Ireland for conduct of business purposes and registered with the Companies Registration Office in Ireland No. 907126 & with VAT No. IE 9578054E. If this material is distributed in or from, the Dubai International Financial Centre (DIFC), it is communicated by The Bank of New York Mellon, DIFC Branch (the "DIFC Branch") on behalf of BNY Mellon (as defined above). This material is intended for Professional Clients only and no other person should act upon it. The DIFC Branch is regulated by the Dubai Financial Services Authority and is located at DIFC, Gate Precinct Building 5 North, Level 6, Room 601, P.O. Box 506723, Dubai, U.A.E. The Bank of New York Mellon SA/NV (Luxembourg Branch) is authorised by the ECB and subject to limited regulation by the Commission de Surveillance du Secteur Financier are available from us on request.

This material is issued in the UK, Israel, Chile, Mexico, Peru and Uruguay by BNY Mellon Investment Management EMEA Limited, BNY Mellon Centre, 160 Queen Victoria Street, London EC4V 4LA. Registered in England No. 1118580. Authorised and regulated by the Financial Conduct Authority. Issued in Europe (ex-Switzerland) by BNY Mellon Fund Management (Luxembourg) S.A. (BNY MFML), a public limited company (société anonyme) incorporated and existing under Luxembourg law under registration number B28166 and having its registered address at 2-4 Rue Eugène Ruppert L-2453 Luxembourg. BNY MFML is regulated by the Commission de Surveillance du Secteur Financier (CSSF). Issued in Switzerland by BNY Mellon Investments Switzerland GmbH, Talacker 29, CH-8001 Zürich, Switzerland. Authorised and regulated by the FINMA. Issued in Brazil by ARX Investimentos Ltda., Av. Borges de Medeiros, 633, 4th floor, Rio de Janeiro, RJ, Brazil, CEP 22430-041. Authorized and regulated by the Brazilian Securities and Exchange Commission (CVM).

In Asia-Pacific, The Bank of New York Mellon, Singapore Branch is subject to regulation by the Monetary Authority of Singapore. The Bank of New York Mellon, Hong Kong Branch (a banking corporation organized and existing under the laws of the State of New York with limited liability) is subject to regulation by the Hong Kong Monetary Authority and the Securities & Futures Commission of Hong Kong. The Bank of New York Mellon, Seoul Branch is subject to regulation by the Financial Services Commission, the Financial Supervisory Service and The Bank of Korea.

If this material is distributed in Japan, it is distributed with respect to investment services by The Bank of New York Mellon, Tokyo Branch, The Bank of New York Mellon Securities Company Japan Ltd, and/or The Bank of New York Mellon Trust (Japan), Ltd., and with respect to investment management by BNY Mellon Asset Management Japan Co., Ltd. All BNY Mellon legal entities in Japan mentioned in this paragraph are ultimately wholly-owned by The Bank of New York Mellon Corporation, subject to regulation by the Financial Services Agency, and located in Marunouchi Trust Tower Main, 1-8-3 Marunouchi, Chiyoda-ku, Tokyo 100-0005, Japan.

Not all products and services are offered in all countries.

BNY Mellon in Australia is subject to regulation by the Australian Prudential Regulation Authority and is exempt from holding an Australian Financial Services License and is regulated by the New York State Department of Financial Services under the New York Banking Law which is different from Australian law. If this document is issued or distributed in Australia, it is issued by BNY Mellon with respect to non-investment management products and services (and excludes corporate trust and agency services), with respect to investment management products and services, by BNY Mellon Investment Management Australia Ltd. (ABN 56 102 482 815, AFS License No. 227865) located at Level 2, 1 Bligh Street, Sydney, NSW 2000. With respect to corporate and agency trust services, this document is issued or distributed in Australia by The Bank of New York Mellon, on behalf of BNY Mellon Australia Pty Ltd (ACN 113 947 309) located at Level 2, 1 Bligh Street, Sydney NSW 2000, and relates to products and services of BNY Mellon Australia Pty Ltd or one of its subsidiaries. BNY Mellon Australia Pty Ltd is ultimately wholly-owned by The Bank of New York Mellon Corporation. The Bank of New York Mellon does not provide this product or service. None of BNY Mellon Australia Pty Ltd or its subsidiaries is an authorized deposit-taking institution and the obligations of BNY Mellon Australia Pty Ltd or its subsidiaries of New York Mellon nor any of its related entities stands behind or guarantees obligations of BNY Mellon Australia Pty Ltd.



Disclosures and Disclaimers

BNY Mellon Capital Markets EMEA Limited, an indirect wholly owned broker dealer subsidiary of The Bank of New York Mellon Corporation, is an investment firm authorised and regulated by the Financial Conduct Authority UK (FCA) under registration number 580200 and provides services to Professional Clients and Eligible Counterparties but not to Retail Clients (in each case as defined in the FCA Rules) in the European Economic Area. BNY Mellon Capital Markets EMEA Limited is not licensed in any other jurisdiction and accordingly, it does not target, promote or offer its products and services to clients outside of the European Economic Area (EEA) and nothing in this communication shall be construed as intended for any persons outside the EEA or for any non-EEA persons. BNY Mellon Capital Markets EMEA Limited is registered in England with company number 03766757 and operates from its registered office and place of business at One Canada Square, London E14 5AL. Past performance is not a guide to future performance of any instrument, transaction or financial structure and a loss of original capital may occur. Calls and communications with BNY Mellon Capital Markets EMEA Limited may be recorded, for regulatory and other reasons.

The information contained in this material is intended for use by wholesale/professional clients or the equivalent only and is not intended for use by retail clients. If distributed in the UK, this material is a financial promotion.

This material, which may be considered advertising, is for general information purposes only and is not intended to provide legal, tax, accounting, investment, financial or other professional advice on any matter. This material does not constitute a recommendation by BNY Mellon of any kind. Use of our products and services is subject to various regulations and regulatory oversight. You should discuss this material with appropriate advisors in the context of your circumstances before acting in any manner on this material or agreeing to use any of the referenced products or services and make your own independent assessment (based on such advice) as to whether the referenced products or services are appropriate or suitable for you. This material may not be comprehensive or up to date and there is no undertaking as to the accuracy, timeliness, completeness or fitness for a particular purpose of information given. BNY Mellon will not be responsible for updating any information contained within this material and opinions and information contained herein are subject to change without notice. BNY Mellon assumes no direct or consequential liability for any errors in or reliance upon this material.

This material may not be distributed or used for the purpose of providing any referenced products or services or making any offers or solicitations in any jurisdiction or in any circumstances in which such products, services, offers or solicitations are unlawful or not authorized, or where there would be, by virtue of such distribution, new or additional registration requirements.

Money market fund shares are not a deposit or obligation of BNY Mellon. Investments in money market funds are not insured, guaranteed, recommended or otherwise endorsed in any way by BNY Mellon, the Federal Deposit Insurance Corporation or any other government agency. Securities instruments and services other than money market mutual funds and off-shore liquidity funds are offered by BNY Mellon Capital Markets, LLC.

The terms of any products or services provided by BNY Mellon to a client, including without limitation any administrative, valuation, trade execution or other services shall be solely determined by the definitive agreement relating to such products or services. Any products or services provided by BNY Mellon shall not be deemed to have been provided as fiduciary or adviser except as expressly provided in such definitive agreement. BNY Mellon may enter into a foreign exchange transaction, derivative transaction or collateral arrangement as a counterparty to a client, and its rights as counterparty or secured party under the applicable transactional agreement or collateral arrangement shall take precedence over any obligation it may have as fiduciary or adviser or as service provider under any other agreement.

Pursuant to Title VII of the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 and the applicable rules thereunder, The Bank of New York Mellon is provisionally registered as a swap dealer with the Commodity Futures Trading Commission ("CFTC") and is a swap dealer member of the National Futures Association (NFA ID 0420990).

BNY Mellon (including its broker-dealer affiliates) may have long or short positions in any currency, derivative or instrument discussed herein. BNY Mellon has included data in this material from information generally available to the public from sources believed to be reliable. Any price or other data used for illustrative purposes may not reflect actual current conditions. No representations or warranties are made, and BNY Mellon assumes no liability, as to the suitability of any products and services described herein for any particular purpose or the accuracy or completeness of any information or data contained in this material. Price and other data are subject to change at any time without notice.

All references to dollars are in US dollars unless specified otherwise. Prior results do not guarantee a similar outcome. The financial products (other than deposit products) mentioned are not insured or protected by any government, state or federal agency (including the Federal Deposit Insurance Corporation), are not deposits of or guaranteed by BNY Mellon or any bank or non-bank subsidiary thereof, and are subject to investment risk, including the loss of principal amount invested. References to Assets Under Management and Assets Under Custody and/or Administration are as of September 30, 2019.

This material may not be reproduced or disseminated in any form without the prior written permission of BNY Mellon. Trademarks, logos and other intellectual property marks belong to their respective owners, are for informational and reference purposes only and are not intended to imply an endorsement of any kind.

Additional information about our company is available in our annual report on Form 10-K, proxy statement, quarterly reports on Form 10-Q and our current reports on Form 8-K filed with the SEC and available at www.sec.gov.

The Bank of New York Mellon, member FDIC.

© 2019 The Bank of New York Mellon Corporation. All rights reserved.



