

The Future of Custody: BNY Mellon's Karolyn Ferris on Market and Regulatory Changes

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BNY Mellon: Built for Investors

BNY Mellon: By the Numbers

At March 31, 2014

\$27.9 trillion

Assets under custody and/or administration

\$1.6 trillion

Assets under management¹

\$2 trillion

Average tri-party repo balances²

\$184 billion

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Private client assets

The Investments Company for the World

BNY Mellon is an investments company. We provide investment management and investment services that help you invest, conduct business and transact in markets all over the world.

Powering the Investment Lifecycle

We provide services for every phase of the investment lifecycle. Whether you're looking to create, trade, hold, manage, distribute or restructure investments, we can help.

Turning Insights into Action

In a profoundly challenging world for investments, BNY Mellon transforms insight into action and can help investors find their way.

1,2 - See important disclosures and disclaimers in Appendix.

Our Clients

Institutional and Individual – The Clients We Serve

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 Families

Why Clients Choose BNY Mellon

- We offer a sophisticated and comprehensive range of investments capabilities.
- Whatever an investor needs along the investment lifecycle, we can help.
- We develop a collaborative partnership with clients and design customized solutions.

Our Presence

BNY Mellon Operates in 35 Countries and Over 100 Markets



Global Service, Local Delivery

- Powered by the collaborative and collective efforts of over 51,400 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.



Custody Landscape

Custody Landscape: Changes to our Industry Over the Past Several Years

Market Volatility

- Interest rate uncertainty and timing of fiscal tightening weighing on investors
- Slow economic growth following stimulus, IMF revised down global growth forecast for 2014 to 3.6%
- · Global sovereign debt and austerity issues continue to plague investors and governments
- Growing liquidity crunch due to new capital and collateral requirements

Emerging & Alternative Investments

- Continuing, but subdued emerging markets economic growth
- 5% YOY growth estimated in institutional holdings in alternatives, to 25% at 2013E1
- · Retail alternatives expected to go mainstream
- Investors seeking greater transparency and better risk management tools

Regulatory Reform

- Market participants awaiting finalization of global regulations (e.g., T2S, AIFMD, Dodd-Frank, Money Market Funds)
- New regulations aimed at investor protection and risk mitigation (e.g. Solvency II, AIFMD)
- Various regulations aimed at increasing transparency/disclosure of data, transactions, & fees
- · New capital requirements, financial transaction taxes, VAT on fund managers

Cost Awareness

- Many FIs undertaking their own "transformation" programs
- Clients seeking cost efficiencies to compensate for lower-than-expected returns
- Vanguard reducing index licensing estimates savings will be in \$10s \$100s of millions

Pension Funding

- Strong equity markets contributing to record funding levels, U.S. Corporate pension funding at 91% in Sep²
- Despite improvement, long-term funding remains a concern amongst DB sponsors globally, some seeking risk transfer to insurers
- Global growth of DC plans expected to continue to outpace that of DB plans
- Target-date funds (TDFs) expected to grow to \$1.7T, becoming 60% of DC assets and revenues by 2015³
- 1. McKinsey Quarterly, September 2012 "23% of institutional holdings (\$6.5 trillion) will experience 5% Year on year growth to reach a new high of 25% at the end of 2013." www.mckinsey.com.
- BNY Melle

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3. McKinsey & Company. "Winning in the Defined Contribution Market of 2015: New Realities Shape the Competitive Landscape." https://www.mckinsey.com.

Positioning for the Future

A. Reducing Risk & Protecting Investors

- Tools to manage increased exposure to alternatives
- Need for better understanding of risk

B. Regulatory, Accounting & Tax Changes

- Building regulatory support service
- Publication of tax and regulatory guides

C. Improve Client Service

- Be more creative, analytical and consultative with clients
- Supporting new technology mobile, tablets, data visualization, etc.

D. Effective Cost Management

- Middle office and back office outsourcing
- Revaluate pricing of services

Thought Leadership – Evolution & the New Frontier of Risk

Collaboration with Dr. Harry Markowitz to identify best practice in the changing landscape of risk management:

- Intend to study and review the risk management processes of Asset Owners
- Comprehend how market events or regulatory change is helping to shape a holistic framework beyond market risk
- Identify the resource implications and other challenges in adopting the appropriate risk culture
- White paper published early 2014

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Industry leader to offer best practices through Conferences and White Papers

The Future of Risk – Current Market Trends

Increased Risk Focus

 Focus on risk measurement, management and mitigation more prevalent given down-cycle market conditions post-2008

Alternative Assets Growing

 Move to alternatives for diversification/alpha generation - pressure for transparency, investment-policy compliance and enterprise reporting

Integrated Reporting

- Provide transparency / analytics across all assets, all liabilities (regardless of asset class, custody/non-custody)
- Asset / Liability mismatch drives requirement for various actuarial and scenario analyses

Regulatory Environment

 Sustained regulatory environment creates need for transparency, insightful information and reporting services

Skilled Risk Experts Needed

Desire for highly skilled risk experts to assist with interpretation of information and advisory

"The Future of Risk" - Conceptual Model



2. Insight Tools and reports that deliver insight into risk/return

1. Transparency Robust data repository of holdings & characteristics information across asset classes that serves as the foundation for providing insight & transparency

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Client Requirements

Collateral Services
Hedging Strategy
Risk Modeling
Portfolio Construction
Asset Allocation
Develop Investment Guidelines
Manager Selection & Due Diligence

Scenario Analysis Modeling risk/return Stress Testing Liquidity Analysis Asset/Liability Analysis Exposure Reporting Benchmarking Performance Measurement

Holdings/Analytics Client/Market Data Hosted Data Warehouse Look through Alternative Investments Meta Data

In Conclusion...

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- Client demands expertise and knowledge from their provider
- Demands will continue to grow for more transparency with more frequent and detailed reporting across all asset classes
- Regulatory pressures will not go away

Appendix Disclosures & Disclaimers

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- 1. Assets under management include investment boutiques and wealth management.
- 2. Includes tri-party repo collateral worldwide.

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