

Northern Trust Asset Management Passive Investment Solutions



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NORTHERN TRUST

PROPOSED AGENDA

- Northern Trust Asset Management Overview
- Index Management Capabilities
- Passive Global Equity
- Passive Global Fixed Income
- Transition Management
- Appendix

Northern Trust Asset Management Overview

PRINCIPLES THAT ENDURE



NORTHERN TRUST

Service

Relentless drive to provide exceptional service.

Northern Trust's core principles of service, expertise, and integrity have remained constant for over 125 years, guiding Northern Trust's evolution to a multi-faceted global financial services provider.

Expertise

Resolving complex challenges with multi-asset class capabilities.

Throughout our history and changing market environments, we have led the financial services industry by aligning our efforts with these guiding principles.

Integrity

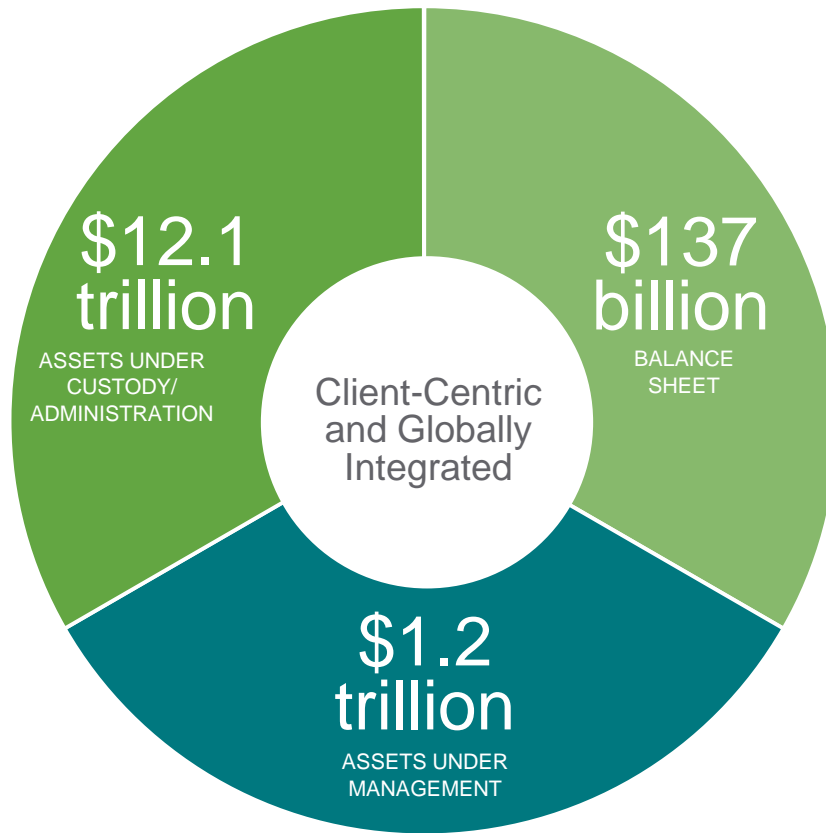
Acting with the highest ethics, utmost honesty and unfailing reliability.

Today, we remain committed to these founding principles which continue to unite and drive our partners around the globe — delivering our clients unparalleled service and expertise, with integrity.

NORTHERN TRUST CORPORATION

Serving the world's most-sophisticated clients – from sovereign entities and the wealthiest individuals, to the largest global corporations and hedge funds.

GLOBAL PLATFORM



As of December 31, 2019

¹Standard and Poor's, senior debt

²For additional information on these awards, see important information on page 10.

AT A GLANCE

- Founded in 1889
- Headquartered in Chicago, IL
- Locations in 24 countries
- 20,000 global employees
- Diversified revenue streams
- A+ debt rating; well-capitalized¹



World's
most admired
companies[®]

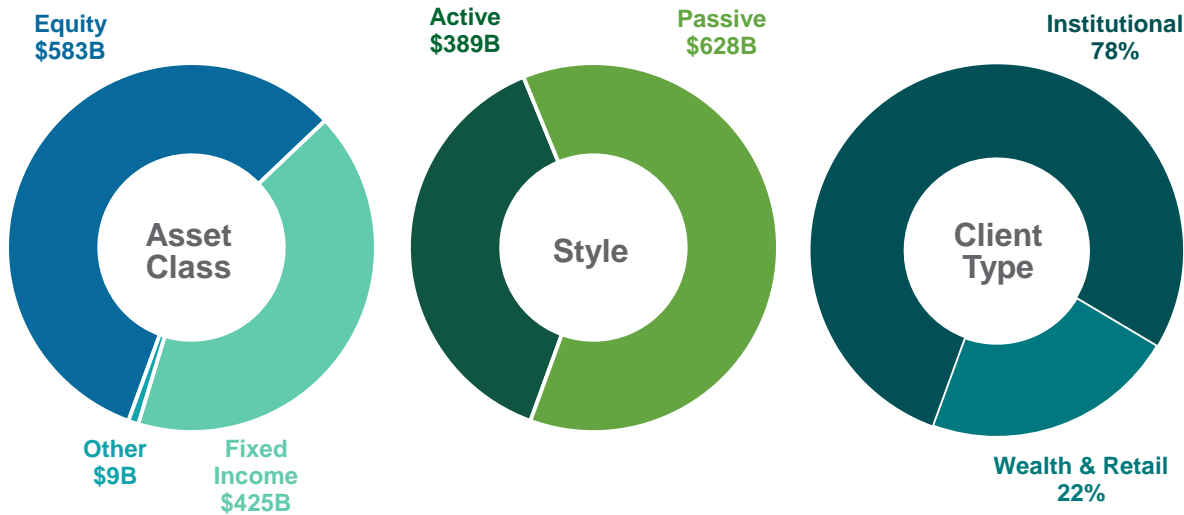
Fortune Magazine²



NORTHERN TRUST ASSET MANAGEMENT

A leading global investment manager with a client-centric culture rooted in a fiduciary heritage.

TOTAL ASSETS UNDER MANAGEMENT



A TRUSTED PARTNER

Leveraging the strength of Northern Trust

Global network of investment professionals with deep expertise

Demonstrated ability to thrive in various market environments

Progressive thought leadership and unique insights

Solving complex global challenges with innovative solutions

Focused on placing the needs of our clients above all else

\$1.0 trillion
TOTAL AUM* | **World's 18th largest asset manager**

*Assets under management as of December 31, 2019. For the Northern Trust Asset Management entities included in AUM total, please see disclosure at end of this document. The above rankings are not indicative of future performance. Unless otherwise noted, rankings are based on total worldwide assets under management of \$885 billion as of December 31, 2018 by Pensions & Investments magazine's 2019 Special Report on the Largest Money Managers.

ASSET MANAGEMENT EXPERTISE

Investment solutions and asset allocation informed by deep capital markets analysis. Comprehensive asset class capabilities from passive and factor-based, to fundamental active and multi-manager.

Capital Markets Expertise

Equity

Factor-Based
Active
Passive
Tax Advantaged
Multi-Manager

Fixed Income

Active
Passive
Cash Management
Multi-Manager

Alternatives

Hedge Funds
Private Equity
Private Credit
Real Assets
Infrastructure
Real Estate

Solutions

Sustainable Investing
Retirement
Target Date
Multi-Manager
Investment Advisory
Focus Research

Asset Allocation

Strategic
Tactical

..... Forward-looking, historically aware investment approach

GLOBAL PRODUCT VEHICLES

Collective Funds | Common Contractual Funds (CCF) | Common Funds | Exchange Traded Funds (ETFs) | Fonds voor Gemene Rekening (FGR)

Investment Company Variable Capital (ICVC) | Managed Accounts | Mutual Funds | Separate Accounts

A GLOBAL LEADER IN ASSET MANAGEMENT

Providing innovative solutions to meet client objectives has earned the confidence of global investors.

TOP MONEY MANAGER RANKING

Worldwide Assets¹
18TH LARGEST

Worldwide Institutional Assets²
15TH LARGEST

Factor-Based Strategies¹
9TH LARGEST

Sovereign Wealth Funds¹
8TH LARGEST

Endowment/Foundation Assets⁴
5TH LARGEST

Institutional Cash Manager³
2ND IN THE U.S.

Indexed (U.S.) Equity⁴
5TH LARGEST

Indexed (U.S.) Fixed Income⁴
4TH LARGEST

ETF Sponsor
12TH LARGEST IN THE U.S.

Equity

Leaders in Factor-based investing since 1994

ESG

Over 30 Years of Managing Socially Responsible Portfolios
UNPRI Signatory

Multi-Manager

Third-party manager solutions
9th Largest Outsourcing Manager Worldwide / 7th U.S.⁶

Flexshares®

Family of equity, fixed income & real asset ETFs

Fixed Income & Liquidity Solutions

Two-time Fixed Income Municipal Manager of the Year⁵

Retirement Solutions

10th Largest DB Manager⁴
10th Largest DC Manager³


50 South Capital

Hedge Funds and Private Equity Solutions

Northern Funds

\$173 billion⁷ diversified mutual fund family

¹Total worldwide assets under management. ²Worldwide institutional assets under management. ³U.S. Institutional, tax exempt. ⁴U.S. Institutional, tax exempt, managed internally. ⁵*Institutional Investor*, 2013 and 2014. ⁶Data as of March 31, 2019. ⁷Data as of December 31, 2019. The above rankings are not indicative of future performance. Unless otherwise noted, rankings are based on total worldwide assets under management of \$885 billion as of December 31, 2018 by Pensions & Investments magazine's 2019 Special Report on the Largest Money Managers.



Stability
+ Strength

Opportunity

We're referred to as the stable institution that people trust—but trust and stability doesn't mean tired and stationary.

Quite the contrary; trust and stability mean we operate from a position of strength.

And with strength comes the ability to identify, create and seize opportunities for our clients.

IMPORTANT INFORMATION

2018 One of the World's Most Admired Companies

Fortune's survey partners at Hay Group starts with approximately 1,500 companies: the Fortune 1,000 -- the 1,000 largest U.S. companies ranked by revenue; non-U.S. companies in Fortune's Global 500 database with revenues of \$10 billion or more. Hay then selects the highest-revenues companies in each industry, surveying a total of 680 companies from 28 countries. To create the 51 industry lists, Hay polled executives, directors and analysts to rate companies in their own industry on nine criteria, from investment value to social responsibility. A company's score must rank in the top half of its industry survey to be listed.

<http://fortune.com/worlds-most-admired-companies>

(click on `See our methodology and credits')

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Past performance is no guarantee of future results.

Northern Trust Asset Management is composed of Northern Trust Investments, Inc. Northern Trust Global Investments Limited, Northern Trust Fund Managers (Ireland) Limited, Northern Trust Global Investments Japan, K.K, NT Global Advisors Inc., 50 South Capital Advisors, LLC and investment personnel of The Northern Trust Company of Hong Kong Limited and The Northern Trust Company.

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Index Management Capabilities and Team

INTELLIGENT INDEXING®

Our transparent index management process, backed by industry-leading technology and research, considers risk, liquidity and costs at every stage.

FAST FACTS

\$624.7B AUM*

4th Largest Index Manager¹

OUR ADVANTAGE

Integrated global platform backed by significant scale and infrastructure

Dynamic process centered around efficiency that is designed to avoid unintended exposures, costs and tax implications

Time-tested product suite with a long, consistent track record

OUR CAPABILITIES

Equity

Developed Markets
Emerging Markets
Frontier Markets
Market-Cap Weighted
Alternatively Weighted
ESG

Fixed Income

Broad Indexes
Government Sectors
Securitized Sectors
Credit Sectors
Global Fixed Income

Real Assets

Real Estate
Infrastructure
Natural Resources

¹ Total worldwide assets under management. The above rankings are not indicative of future performance. Unless otherwise noted, rankings are based on total worldwide assets under management of \$885 billion as of December 31, 2018 by Pensions & Investments magazine's 2019 Special Report on the Largest Money Managers.

Assets under management as of 12/31/19

*Index Management AUM does not include \$3.0B of Multi-Manager Solutions Assets.

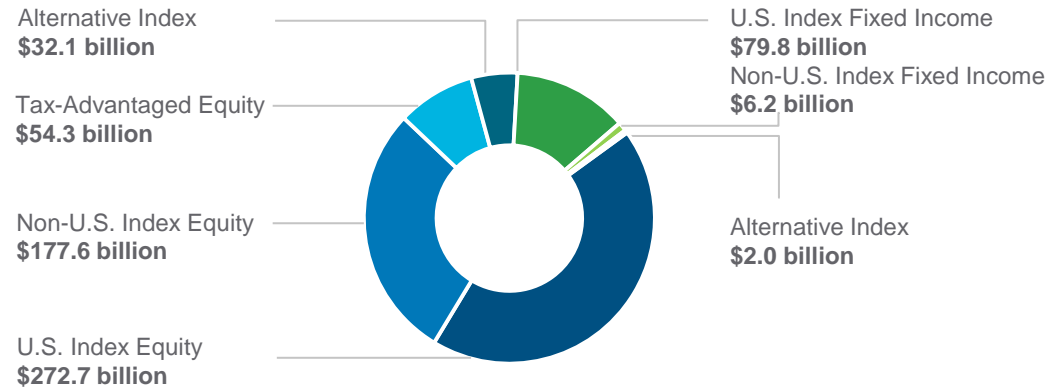
INDEX MANAGEMENT

Traditional market-cap weighted, alternatively-weighted and custom strategies for all asset classes

Total index management assets under management:
\$624.7 billion*
 as of December 31, 2019

Equity:
\$536.7 billion

Fixed Income:
\$88.0 billion



As of December 31, 2019 (updated quarterly). Source: NTAM Finance.

*Index Management AUM does not include \$3.0B of Multi-Manager Solutions Assets.

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For purpose of compliance with the Global Investment Performance Standards (GIPS®) the firm is defined as Northern Trust Asset Management Services, a subset of Northern Trust Asset Management, and includes those investment products managed by NTI, NTGIL, NTFMIL, NTGIJ and TNTC that are distributed through global channels.

As of 12/31/2019 Northern Trust Asset Management had assets under management totaling \$1.0 trillion of which \$949.7 billion is part of the GIPS firm.

GLOBAL TRENDS IN INDEX MANAGEMENT

The seemingly simple world of index investing continues to grow in breadth and complexity.

Global vs. Regional
allocations

Smart Beta and
Factor Investing

Increasing use in
non-traditional asset
classes

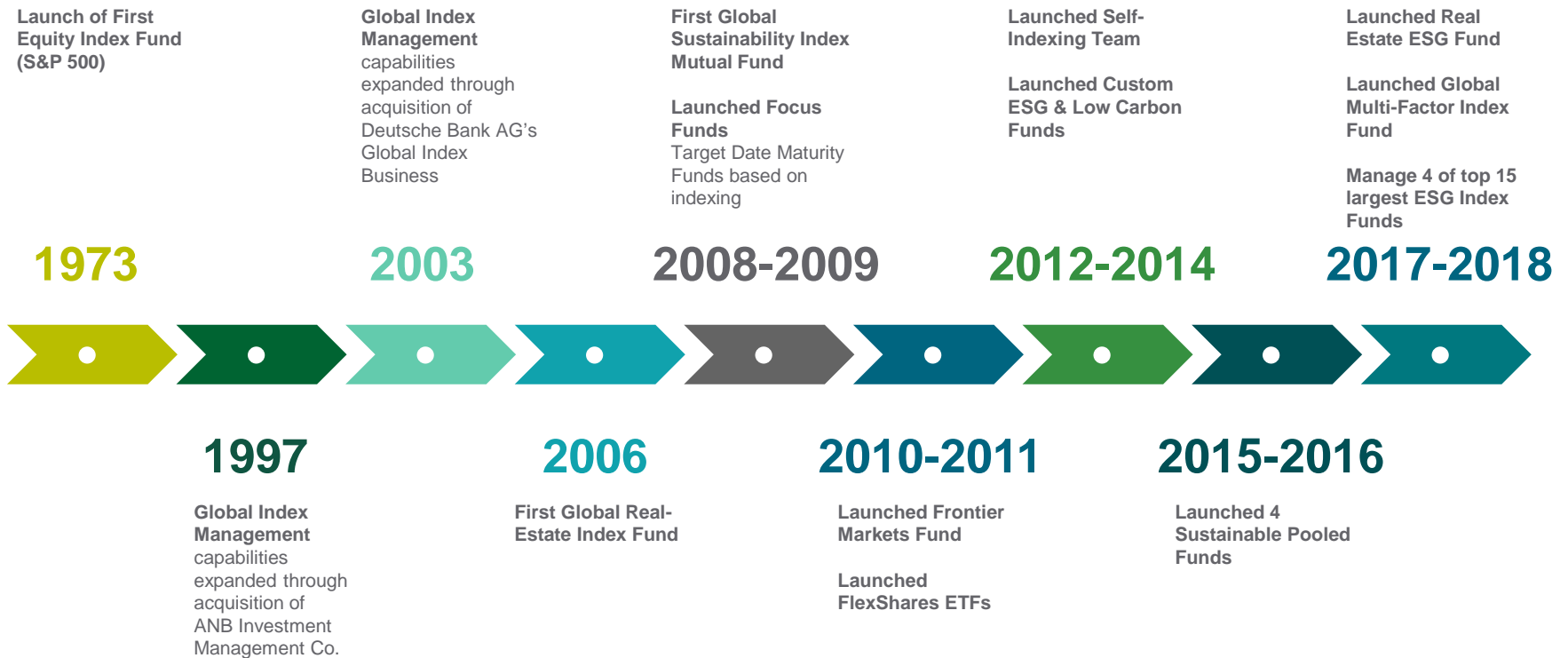
Increasing use of
ESG

Continued country
classification
changes

Self Indexing

NORTHERN TRUST ASSET MANAGEMENT

GROWTH AND INNOVATION IN GLOBAL INDEX MANAGEMENT



WHY NORTHERN TRUST FOR INDEX MANAGEMENT?

Financially strong,
stable firm with index
management as a core
focus

Focus on product
innovation and
customized solutions

High-touch client service

Proven track record
delivering risk-efficient,
cost-effective beta

Experienced investment
team operating on an
integrated global
platform

Equity Index

EQUITY

Equity investment strategies focused on efficient equity returns with intentional risk exposures.

FAST FACTS¹

\$552.6B AUM

99 investment professionals

- Teams in North America, Europe and Asia
- Average industry experience: 17 years

OUR ADVANTAGE

Comprehensive product lineup powered by a global platform of investment experts

Focused on investing in quality companies that exemplify strong financial characteristics and prudent growth

A pioneer in factor-based investing since 1994

Management Styles



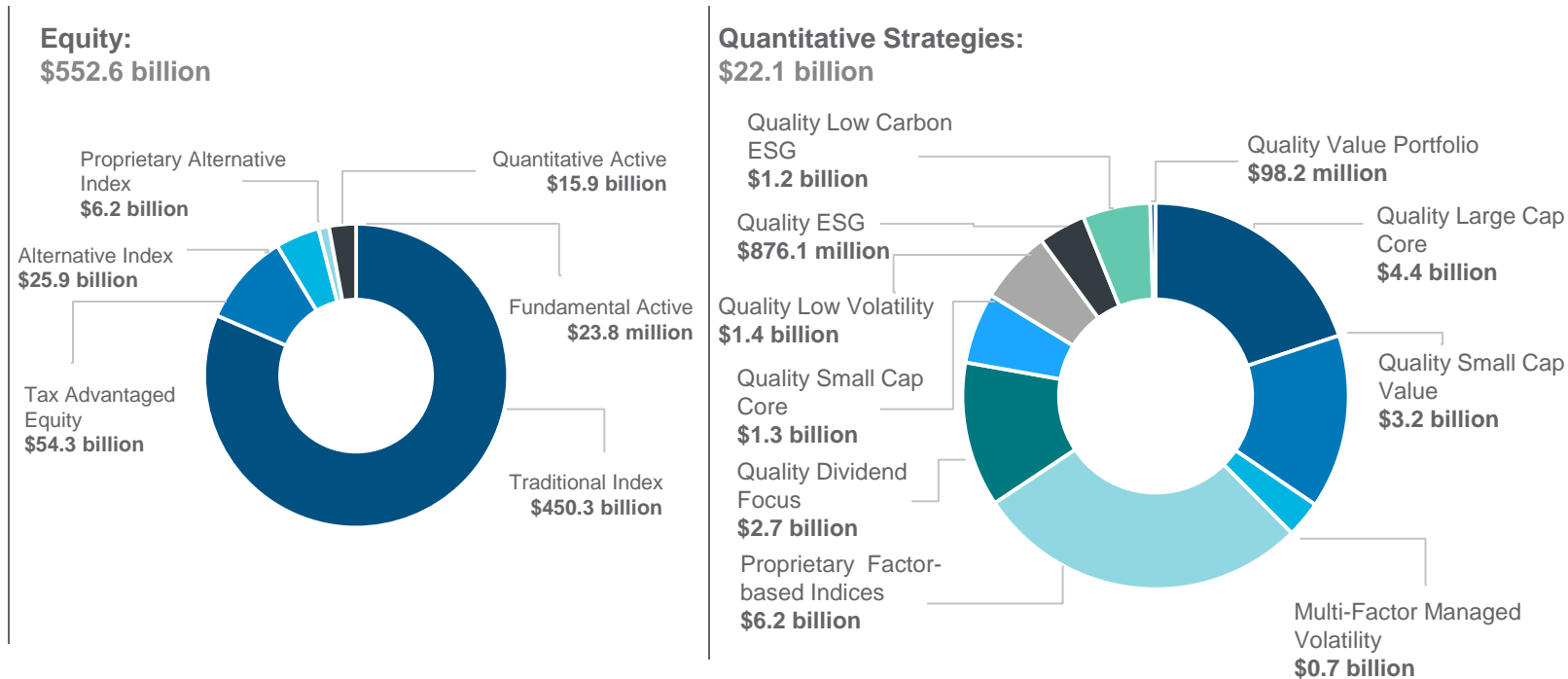
¹All data as of 12/31/2019, unless otherwise noted.

*Equity AUM does not include \$30.1B of Multi-Manager Solutions Assets.

NORTHERN TRUST ASSET MANAGEMENT: EQUITY

Global investment expertise in factor-based investing, index and fundamental strategies

Total equity assets under management: **\$552.6 Billion*** as of December 31, 2019



As of December 31, 2019 (updated quarterly). Source: NTAM Finance.

*Equity AUM does not include \$30.1B of Multi-Manager Solutions Assets.

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For purpose of compliance with the Global Investment Performance Standards (GIPS®) the firm is defined as Northern Trust Asset Management Services, a subset of Northern Trust Asset Management, and includes those investment products managed by NTI, NTGIL, NTGIJ and TNTC that are distributed through global channels.

As of 12/31/2019 Northern Trust Asset Management had assets under management totaling \$1.0 trillion of which \$949.7 billion is part of the GIPS firm.

INDEX EQUITY

Bob Browne, CFA
Chief Investment Officer

INDEX EQUITY

Jake Weaver, CFA, CPA
Head of Index and Tax Advantaged Equity

PORTFOLIO MANAGEMENT & RESEARCH

Chicago

Brent D. Reeder
Head of Index, US

Basit Amin, CFA
Senior Portfolio Manager

Robert Anstine
Senior Portfolio Manager

Keith Carroll
Senior Portfolio Manager

Michael Gleeman, CFA
Senior Portfolio Manager

Chris Jaeger
Senior Portfolio Manager

Lucy Johnston
Senior Portfolio Manager

Steve Santiccioli
Senior Portfolio Manager

Brendan Sullivan, CFA
Senior Portfolio Manager

Alan Aung, CFA
Portfolio Manager

Volter Bagriy, CFA
Portfolio Manager

Joe Park, CFA, CPA
Portfolio Manager

Yair Walny, CFA
Portfolio Manager

London

Nicholas Dymond, CFA
Head of Index, EMEA

James Amatt
Senior Portfolio Manager

Josh Fiennes, CFA
Senior Portfolio Manager

Roel Houwer
Portfolio Manager

Hong Kong

Gregory Pasiaka, CFA
Head of Index, APAC

Masahiro Aikawa, CFA
Portfolio Manager

Nigel Tyler
Senior Portfolio Manager

Mark Underhill
Senior Portfolio Manager

David Crowe
Portfolio Manager

Andrew Allison
Portfolio Manager

Manfred Wong, CFA
Portfolio Manager

EQUITY TRADING

Richard A. Vigness
Head of Trading

Chicago

Peter Driscoll
Senior Equity Trader

Christopher Ebel, CFA
Senior Equity Trader

Sean Finegan, CFA
Senior Equity Trader

Walid Karim
Senior Equity Trader

Ashish Mehta
Senior Equity Trader

Curtis Nass, CFA
Senior Equity Trader

Paul Howaniec
Equity Trader

Jeffrey J Logan
Equity Trader

Dionne Milner
Senior Analyst

London

Martin Ekers
Manager Equity Trader

Peter Hughes
Senior Equity Trader

Kerem Onder
Senior Equity Trader

Hong Kong

Wilson Har
Equity Trader

Michael Tan
Equity Trader

INVESTMENT STRATEGY

Jim McDonald
Chief Investment Strategist

Wouter Sturkenboom, CFA
Chief Investment Strategist – EMEA

Daniel Phillips, CFA
Senior Investment Strategist

QUANTITATIVE RESEARCH AND ANALYTICS

Michael R. Hunstad, Ph.D.
Head of Quantitative Strategies

SELF INDEXING

Michael Deverall
Head of Index Services

EQUITY SPECIALISTS

Christopher Fronk, CFA, CPA
Senior Equity Specialist

Stefanie Hest
Senior Equity Specialist

Emily Lawrence
Senior Equity Specialist – Sustainable Investing

BUSINESS MANAGEMENT

Ali Bleecker
Chief Administrative Officer

RISK MANAGEMENT LEADERSHIP

James P. Kane
Head of Investment Risk Management

A GLOBAL APPROACH TO EQUITY INDEX MANAGEMENT

As our footprint spans the global marketplace, so does our investment process and approach to managing investment solutions.



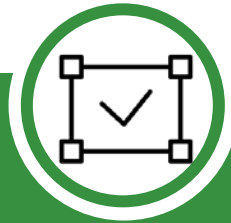
PORTFOLIO MANAGEMENT

- Investment Team
- Portfolio Construction
- Implementation



TRADING/ EXECUTION

- Manage market impact and costs of trading



RISK OVERSIGHT

- Conduct both pre- and post-trade compliance
- Oversee performance on a continuing basis

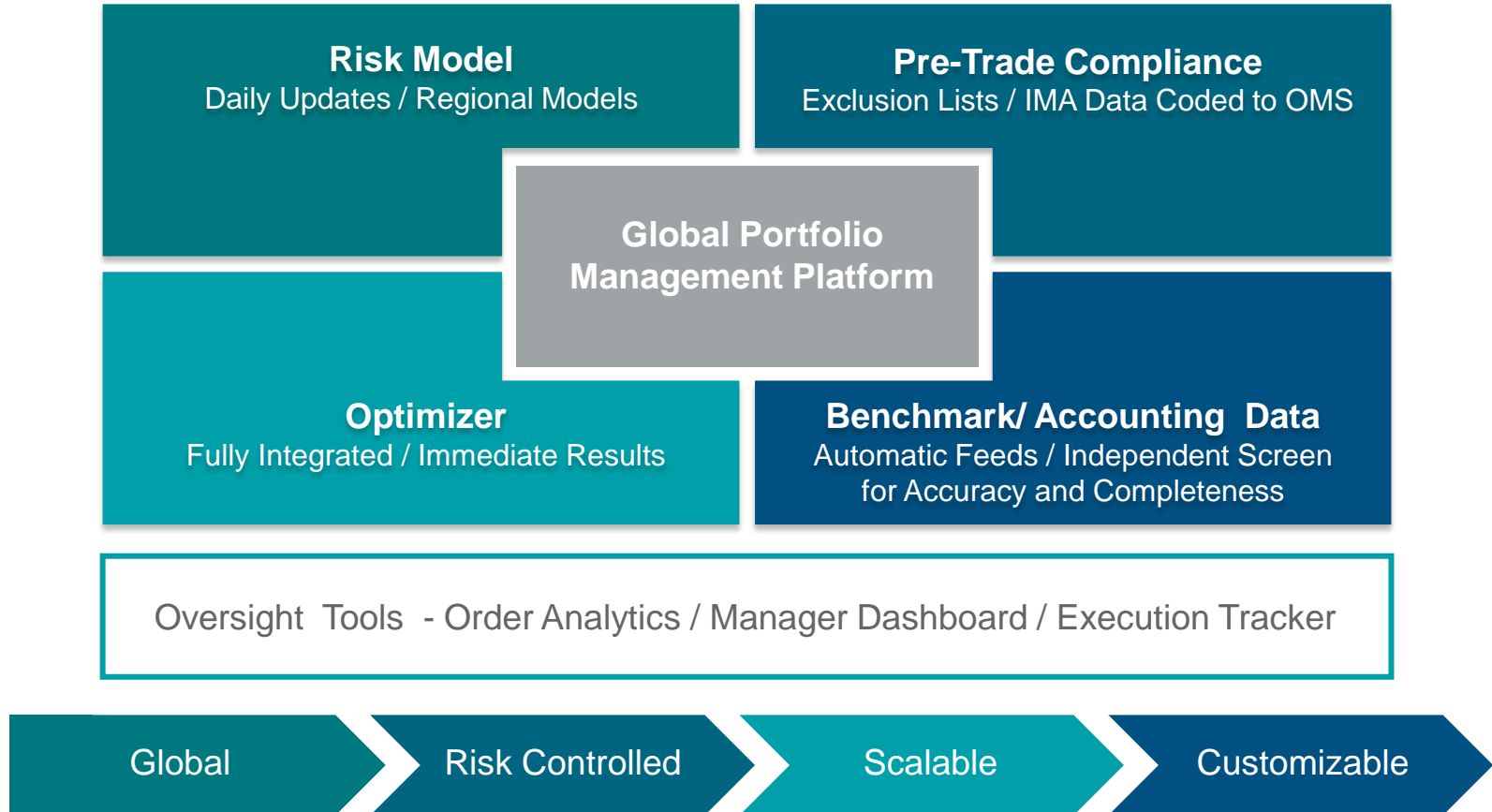


STEWARSHIP & SUSTAINABILITY

- Proxy Voting
- Engagement
- Sustainability Product set
- Minority brokerage

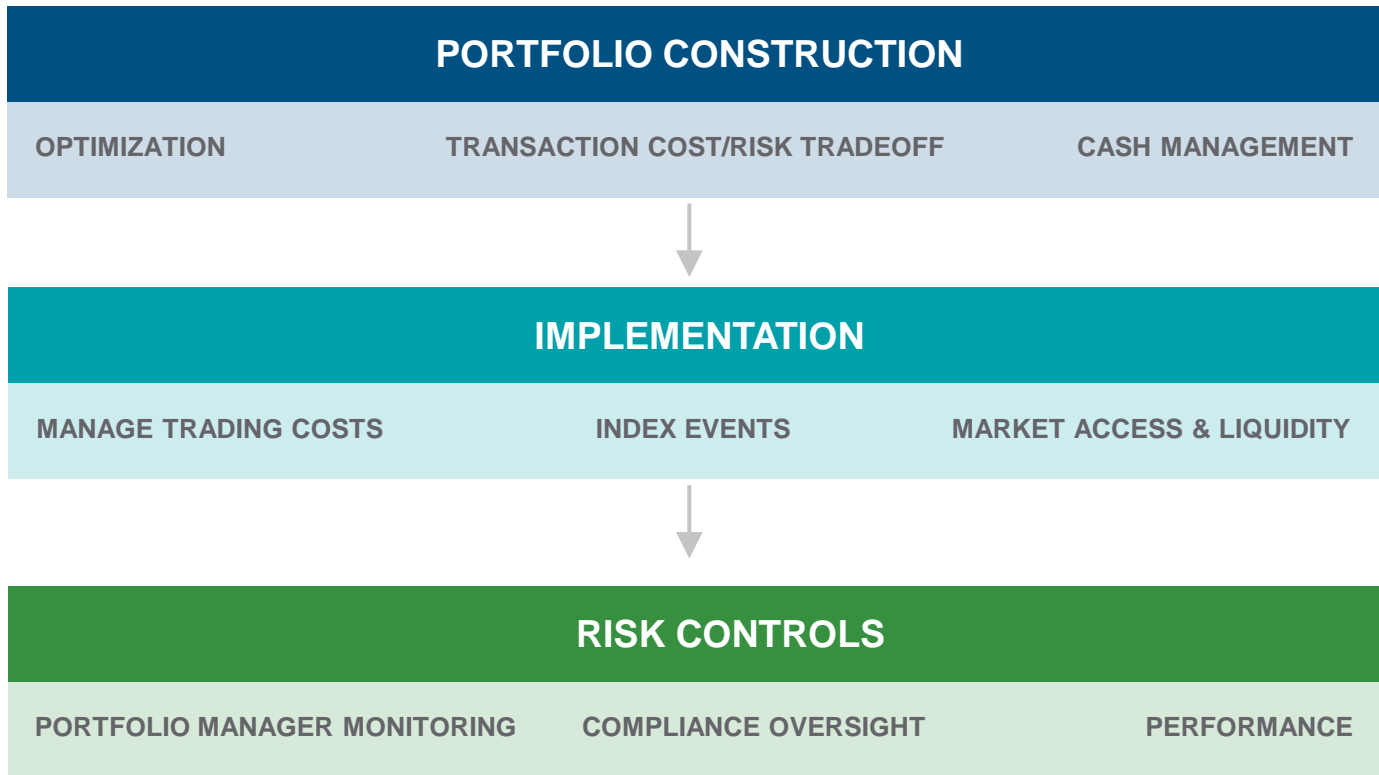
GLOBAL TECHNOLOGY PLATFORM

Sophisticated, consistent, global approach to asset management systems



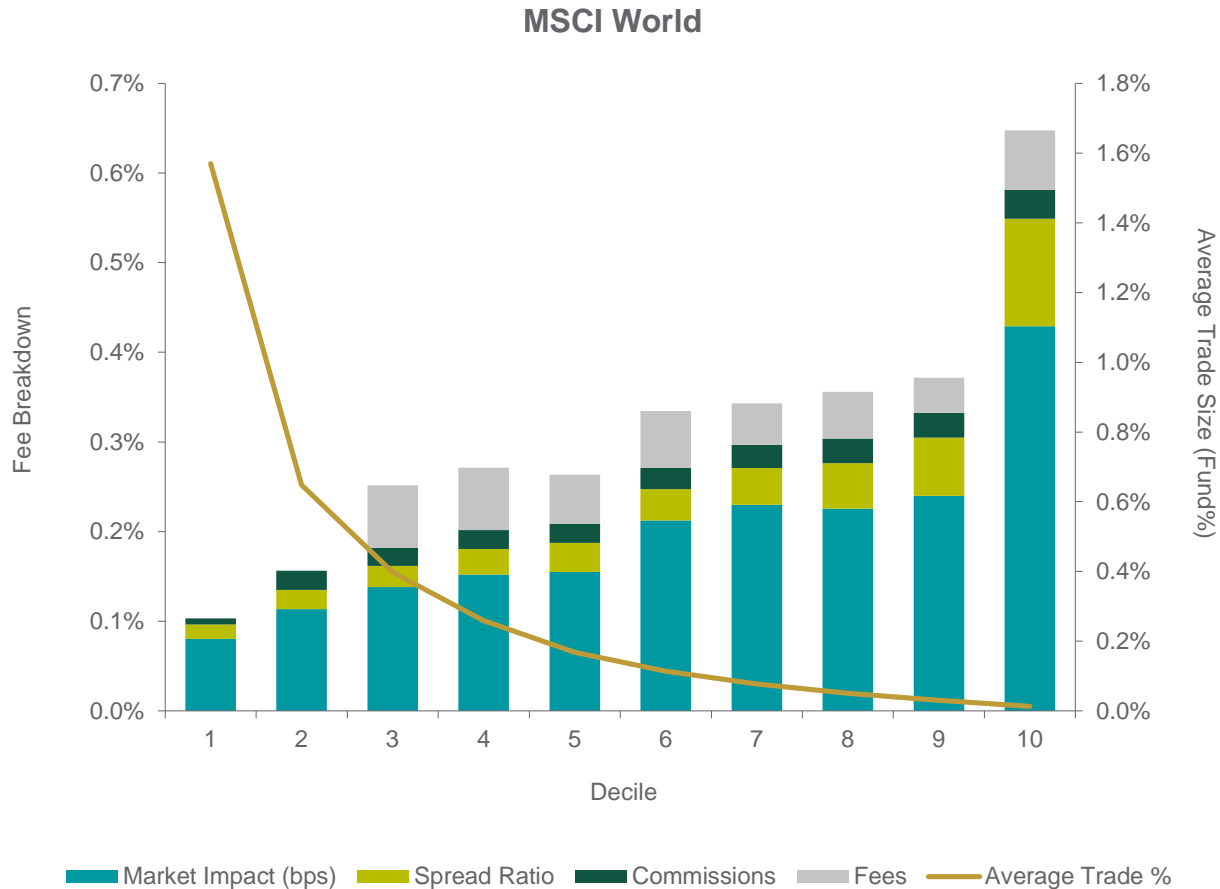
INVESTMENT PHILOSOPHY & PROCESS

Our investment philosophy is grounded in the belief that to efficiently replicate benchmark characteristics, it is vital to consider liquidity, transaction costs, and risk throughout the investment process.



PORTFOLIO CONSTRUCTION

Optimized portfolios and trades allow our Portfolio Managers to consider the trade-off between transaction costs and risks. We emphasize liquidity in portfolio construction.



Source: NTAM, Bloomberg, MSCI – based on Buy of US\$500mm
As of 12/31/2018

PORTFOLIO CONSTRUCTION

Designed to meet your expectations for efficient and cost effective market exposure

**Replicate
Where
possible**

**Optimize
where
sensible**

| | Expected Tracking Error (+/-)* | Stock Mis- weights (+/-) | Country Exposure (+/-) | Industry Exposure (+/-) | Sector Exposure (+/-) |
|-------------------------------------|---|---|---------------------------------------|--|--------------------------------------|
| S&P 500 | 0-1 bps | 1 bps | - | 3 bps | 3 bps |
| Russell 2000 | 1-2 bps | 2 bps | - | 5 bps | 5 bps |
| MSCI World | 1-2 bps | 1-2 bps | 3 bps | 3 bps | 3 bps |
| MSCI Emerging Market | 5-7 bps | 3 bps | 5 bps | 5 bps | 5 bps |

*Tracking error is an ex-ante prediction of tracking error based on security level optimization and weights. The estimated range is annualized and expressed in basis points for the purpose of comparison. Actual/Experienced tracking error can deviate significantly based on, but not limited to, securities lending impact, foreign exchange, cash drag, futures, sampling efficiency, transaction costs.

MULTI-DIMENSIONAL RISK OVERSIGHTS

Continuous process examining portfolio risk, performance attribution and compliance.

Daily Reviews

Portfolio Management Team

- Observe projected tracking error
- Evaluate positioning, risks and costs
- Monitor changes in index constituents and characteristics
- System validation of holdings versus guidelines, in real time
- Conduct pre-trade compliance

Compliance Team

- OMS Systems examine holdings vs. guidelines
- Conduct post-trade compliance

Ongoing Reviews

Investment Governance Committee (Quarterly)

- Consists of senior investment and risk professionals across firm
- Review performance results and peer group
- Review investment strategy decisions and governance

Asset Management Risk Committee (Monthly)

- Oversight and monitoring of investment, operational and regulatory risks
- Key members include Chief Risk Officer, Chief Compliance Officer and Chief Investment Officer

NORTHERN TRUST EQUITY TRADING PLATFORM

Leading market participant with global reach in Equities, Currencies, and Futures across Developed , Emerging, and Frontier markets.



Structure

- Global trading team with 24/6 pass the book infrastructure between dedicated dealing teams in Chicago, London, and Hong Kong
- Straight through electronic order processing from portfolio management origination to trade allocation and settlement



Trading Strengths

- Northern Trust is a sophisticated market participant able to efficiently navigate all markets
- Competitive explicit trading costs in all markets.
- Executes with understanding and optimal blend of opportunity cost and market impact

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ASSET MANAGEMENT

Fixed Income Index

Index Management

FIXED INCOME

Fixed income focused on preservation of capital and income, for taxable and tax-exempt investors

FAST FACTS¹

\$425B AUM

59 investment professionals

- Teams in North America, Europe and Asia
- Average industry experience: 20 years

OUR ADVANTAGE

More than 40 years of experience managing high-quality, well-diversified portfolios

Investment process integrates proprietary research, strategy, and portfolio management to uncover relative value in the marketplace

Solutions across the spectrum using multiple investment vehicles and currencies

MANAGEMENT STYLES

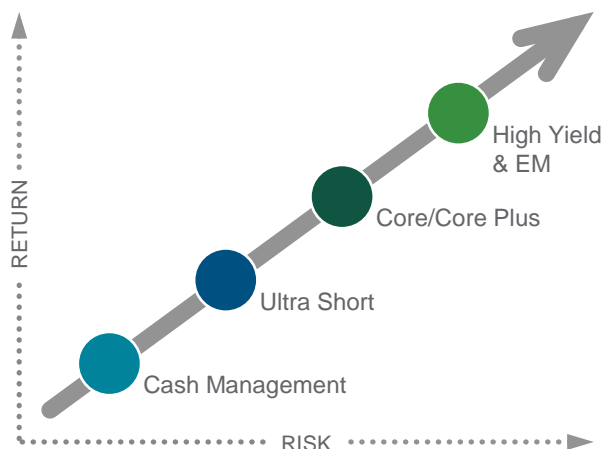
**FUNDAMENTAL
ACTIVE**

**ALTERNATIVELY
WEIGHTED INDICES**

PASSIVE

QUANTITATIVE

FIXED INCOME CAPABILITIES



Taxable and tax-exempt solutions available

CASH MANAGEMENT

High quality securities structured to preserve principal, generate income and provide daily liquidity.

ULTRA SHORT

Total Return Portfolio invested in high quality instruments overnight to five years.

CORE AND CORE PLUS

Total Return Portfolio focusing on sector allocation, security selection and duration/yield curve management.

HIGH YIELD & EM

Total Return Portfolio focusing on non-investment grade bonds

¹All data as of December 31, 2019, unless otherwise noted.

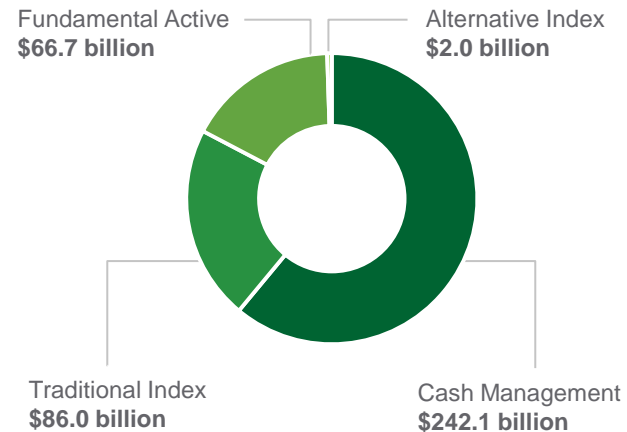
FIXED INCOME FRANCHISE

Fixed Income is a flagship business of Northern Trust Asset Management representing 42% of total Northern Trust Asset Management's assets under management.

Competitive Advantage

- **Breadth and Depth of Experience**
 - *Our 59 investment professionals have an average of 20 years of industry experience*
 - *Our fundamental research driven focus combines both top-down asset and sector allocation along with a bottom-up diversified security selection*
 - *Global presence with partners in Chicago, London, and Bangalore*
- **Customizable and Scalable Approach**
 - *Provide high-touch customer service with a dedicated portfolio management team*
 - *Seek risk-efficient market exposure based on the client's risk and return objectives*
- **Conservative Philosophy**
 - *Traditional, relative-value bond manager that applies independent fundamental credit research with an objective of limiting downside risk and volatility*
 - *Our investment thesis hasn't wavered over the years*

Fixed Income Strategies: \$396.8 billion*



Source: NTAM Finance; assets under management as of 12/31/19

*Fixed Income AUM does not include \$27.8B of Multi-Manager Solutions Assets.

FIXED INCOME

Bob Browne, CFA
Chief Investment Officer

FIXED INCOME

Colin Robertson
Head of Fixed Income

PORTFOLIO MANAGEMENT & RESEARCH

Taxable Fixed Income

Brad Camden, CFA
Senior Portfolio Manager
Head of Long Duration & Ultra-Short
Investment Grade

Morten Olsen
Senior Portfolio Manager
Ultra-Short

Dan Personette, CFA
Senior Portfolio Manager
Interest Rates

Brandon Ferguson, CFA
Senior Portfolio Manager
Investment Grade / ETF Strategies

Bilal Memon
Senior Portfolio Manager
Cash / Ultra-Short

Eric Williams
Senior Portfolio Manager
High Yield

Mousumi Chinara
Senior Portfolio Manager
Investment Grade

Michael Chico, CFA
Senior Portfolio Manager
Developed & Emerging Govts

Chaitanya Mandavakuriti
Senior Portfolio Manager
Global Governments

David Alongi, CFA
Senior Portfolio Manager
Head of Index Strategies

Kevin O'Shaughnessy, CFA
Senior Portfolio Manager
Securitized Products

INVESTMENT STRATEGISTS

Arch King, CFA
Investment Strategist

Molly Montgomery
Investment Strategist

Fixed Income Research

Peter Yi, CFA
Head of Taxable Research &
Cash Management

Mike Egizio
Team Leader Financials

Marie Winters, CFA
Team Leader Industrials

David Unger
Team Leader Industrials

INVESTMENT STRATEGY

Jim McDonald
Chief Investment Strategist

Daniel Phillips, CFA
Senior Investment Strategist

Wouter Sturkenboom, CFA
Chief Investment Strategist – EMEA

INDEX PORTFOLIO MANAGEMENT TEAM

| | Industry (Yrs) | Firm (Yrs) |
|--|----------------|------------|
| David Alongi, CFA Senior Portfolio Manager Head of Index Strategies | 30 | 30 |
| Brandon Ferguson, CFA Senior Portfolio Manager | 15 | 13 |
| Dan Personette, CFA Senior Portfolio Manager | 25 | 24 |
| Michael Chico, CFA Senior Portfolio Manager | 25 | 15 |
| Kevin O'Shaughnessy, CFA Senior Portfolio Manager | 31 | 31 |
| Chaitanya Mandavakuriti Senior Portfolio Manager | 11 | 7 |
| Mousumi Chinara Senior Portfolio Manager | 20 | 1 |
| Ian Birtch Portfolio Manager | 16 | 14 |
| Mike Doyle Senior Portfolio Manager | 21 | 21 |
| RESEARCH TEAM | | |
| 19 Credit/Sector Analysts | 18 | 11 |

GLOBAL ARRAY OF FIXED INCOME CAPABILITIES

Delivery Vehicles

Customized Solutions

Separate Accounts

Mutual Funds

Exchange Traded Funds

Commingled Trust Funds

Defined Contribution Funds

US Strategies

Global Strategies

Broad Benchmarks

Bloomberg Barclays Agg
 Bloomberg Barclays Gov't/Credit
 Bloomberg Barclays Intermed Gov't/Credit
 Bloomberg Barclays Long Gov't/Credit
 Bloomberg Barclays Agg 1-3 Year A+
 Bloomberg Barclays Gov't/Credit 1-3 Year A+
 Bloomberg Barclays Custom Quality Agg

Government Sector

Bloomberg Barclays Gov
 Bloomberg Barclays Short Gov't
 Bloomberg Barclays Intermed Gov't
 Bloomberg Barclays Long Gov't
 ICE BofA Merrill Short Gov't AAA
 Bloomberg Barclays TIPS
 Bloomberg Barclays 1-5 Year TIPS
 Bloomberg Barclays 1-10 Year TIPS
 ICE BofA Merrill TIPS
 Bloomberg Barclays 15-25 Yr Strips

Securitized Sector

Bloomberg Barclays Securitized
 Bloomberg Barclays Mortgage Backed
 Bloomberg Barclays GNMA MBS
 Bloomberg Barclays Asset Backed
 Bloomberg Barclays Commercial Mortgage Backed

Credit Sector

Bloomberg Barclays Credit
 Bloomberg Barclays Intermed Credit
 Bloomberg Barclays Long Credit
 Bloomberg Barclays 1-5 Year Credit
 Bloomberg Barclays Corporate
 ICE BofA Merrill Corp
 ICE BofA Merrill 0-5 Year Corp
 ICE BofA Merrill 1-10 Year Corp
 ICE BofA Merrill Euro Corp Index
 ICE BofA Global High Yield Index

Global Benchmarks

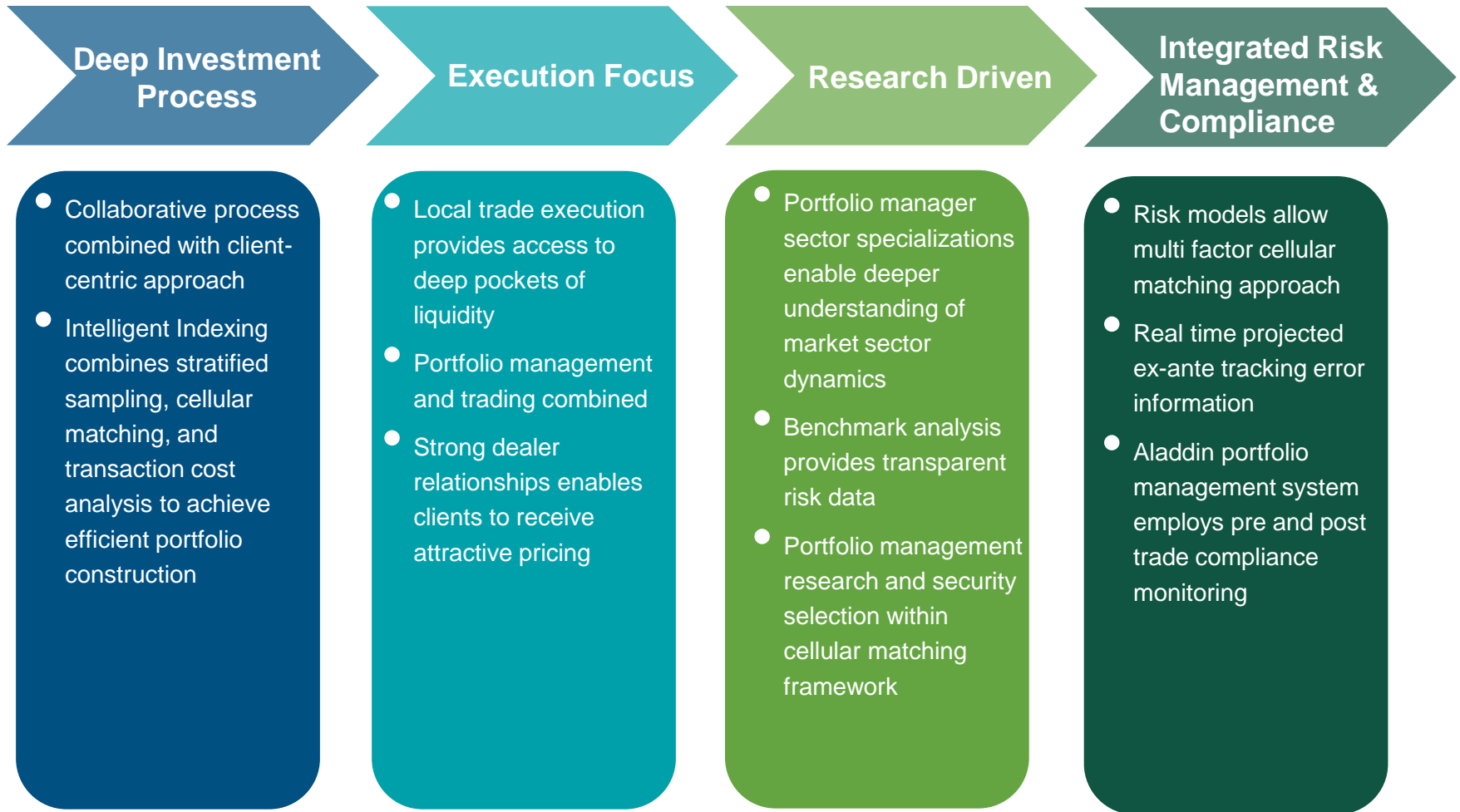
Developed
 Bloomberg Barclays Global Agg
 Bloomberg Barclays Global Securitized
 FTSE World Government
 FTSE Gov't Securities Gilts
 Markit Iboxx Euro Sovereign
 Markit Iboxx Euro Sovereign Inflation-Linked
 JP Morgan GBI
 Bloomberg Barclays Euro Gov't
 Bloomberg Barclays Global Inflation-Linked
 Bloomberg Barclays Fiscal Strength Weighted Treasuries

Emerging
 JP Morgan GBI-EM
 Bloomberg Barclays EM Local Gov't

Custom designed solutions:

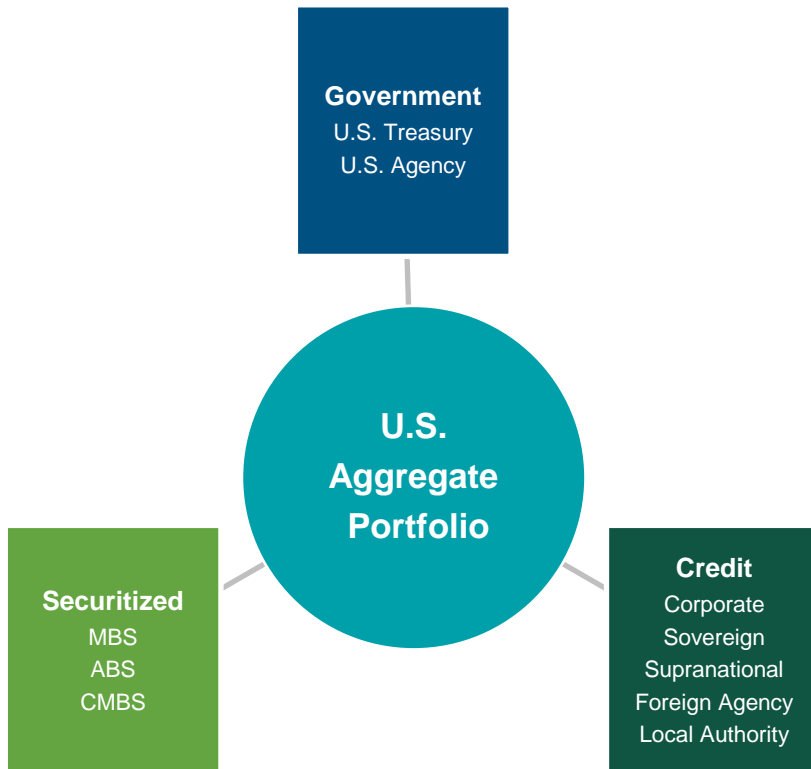
- Follow indices encompassing any of the above components
- Combinations or narrower slices based on sector/subsector, quality, currency
- Offer wider selection of risk/return exposures

FOUR KEY PRINCIPLES DRIVE OUR PHILOSOPHY



COMPONENT APPROACH TO INDEXING FIXED INCOME

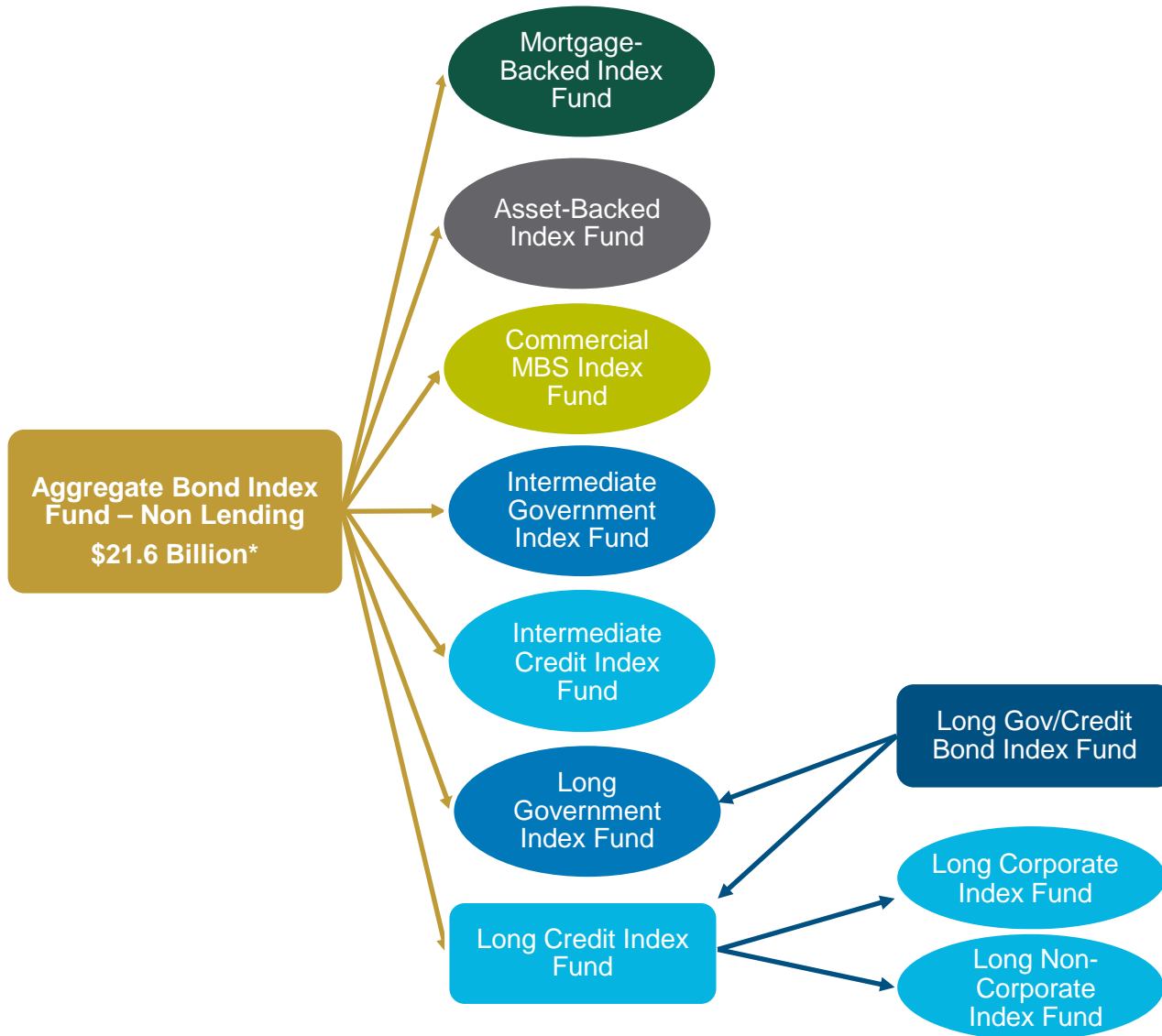
Team-managed, collaborative process utilizing the expertise and skills of portfolio managers / traders in assigned market segments



Features of our component approach

- Lead portfolio manager has responsibility for daily portfolio oversight and activity, ensuring proper weighting of major sectors and overall characteristics and risk.
- Sector specialist portfolio managers are engaged to analyze and construct specific market sectors, bringing detailed sector expertise and awareness.
- Sector specialist portfolio managers are also responsible for trading in assigned sectors, enabling better information on liquidity / transaction costs, and facilitating portfolio construction and sampling decisions.
- Proper construction within component segments enables the combination of component segments to achieve desired overall portfolio risk/return characteristics.

COMPONENT APPROACH TO INDEXING FIXED INCOME



* Represents assets as of December 31, 2019 in the Collective Daily Aggregate Bond Index Fund – Non Lending

INVESTMENT PROCESS

Size and diversity of index members require a disciplined, risk-controlled sampling strategy

Define investment universe

- Desired market segments and exposures
- Risk and return characteristics and objectives

Cellular Matching

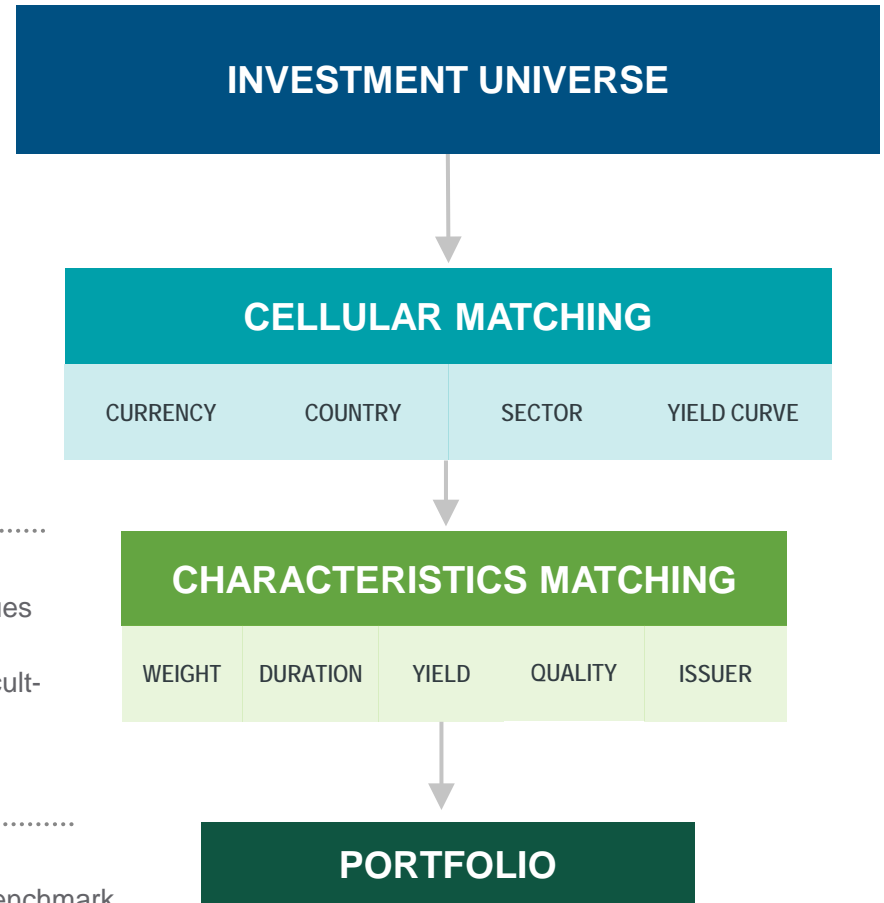
- Decompose portfolio and index into “cells” that represent different segments of the index
- Match portfolio and benchmark in crucial areas of currency, country, duration, contribution-to-duration and yield

Characteristics Matching

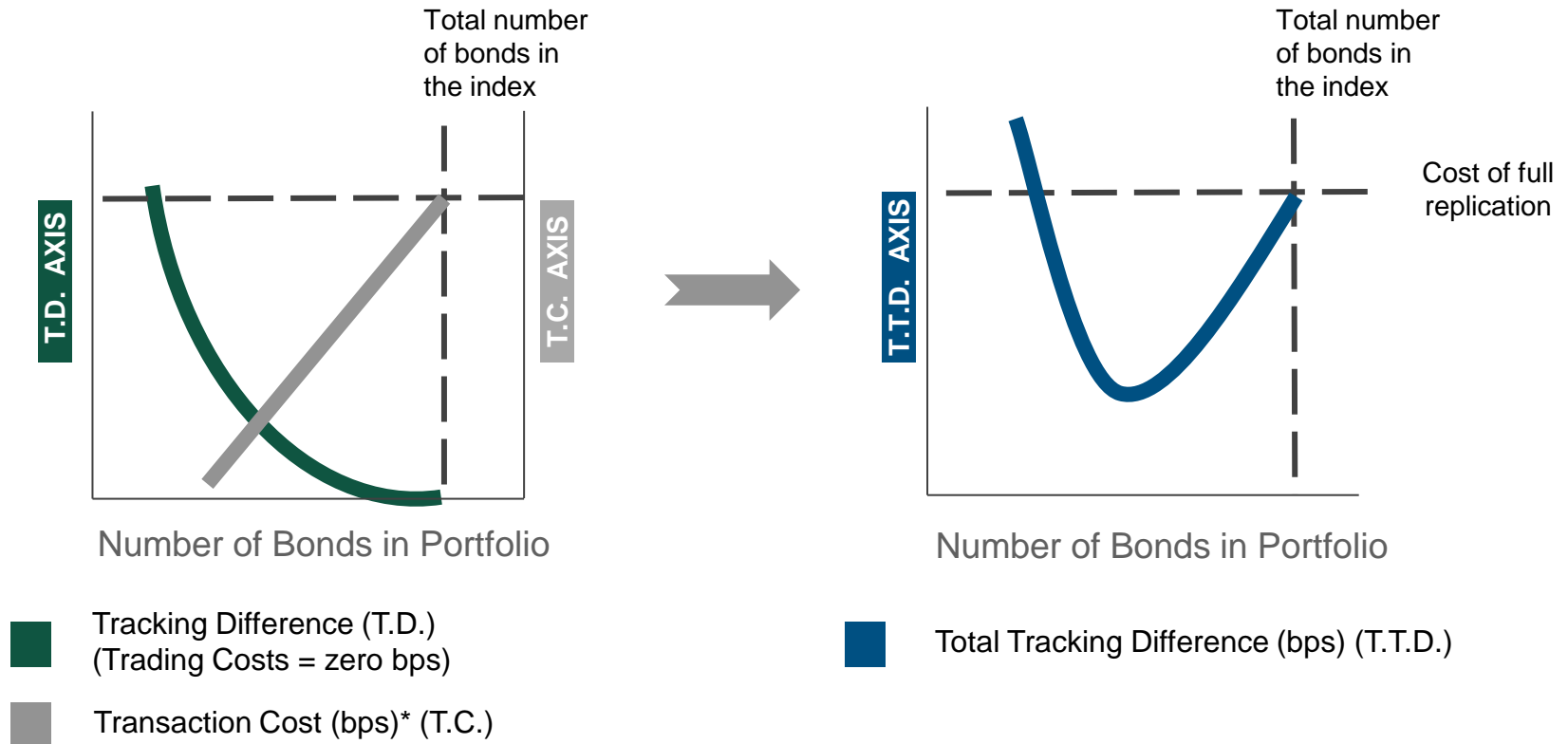
- Construct portfolio consisting of a sample of benchmark issues in order to achieve representative risk/return characteristics.
- Maintain liquidity and avoid costs associated with more difficult-to-access segments
- Manage over/underweights to avoid excess or unnecessary costs (liquidity, trading, tax)

Risk Modeling

- Evaluate ex-ante tracking error volatility (TEV) vs benchmark
- Identify sources of TEV and contributions to risk
- Balance TEV, diversification and transaction costs



INTELLIGENT INDEXING®: SAMPLING



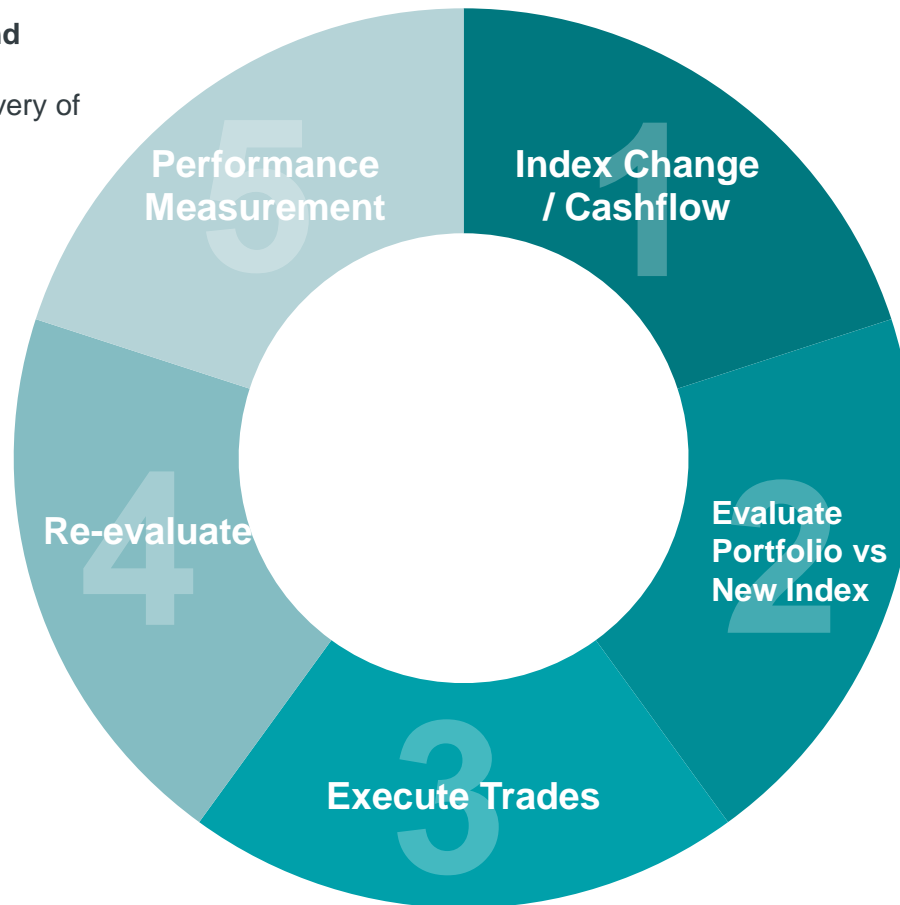
- The chart on the left stylizes the competing costs that require managing in a sampled portfolio. Transaction costs increase with the number of bonds held (to a maximum at full replication).
- The optimum portfolio strategy minimizes tracking difference, which is the sum of both transaction costs and portfolio performance arising from model alignment. This sum is depicted in the right-hand chart.

*Note: Transactions costs are unlikely to be perfectly linear

INTELLIGENT INDEXING®: IMPLEMENTATION

Performance attribution and reporting

- Regular analysis and delivery of periodic reports



Characteristics match across sector, duration, yield curve, credit quality

Repeat step 2 for realigned portfolio

- Report through risk models
- Confirm accuracy of adjustments
- Project tracking error

Trading combined with portfolio management expertise

- Focus on evaluating transaction costs
- Dealer relationships
- Multiple execution methods

INTELLIGENT INDEXING®: TRADING

Liquidity

- Transaction costs are a large contributor to performance deviation from the index
- Liquidity is paramount – not all markets are eligible for an index approach
- Our size and scale facilitate strong execution from dealer network

Link to Market

- Local execution vital to access trade flow from real money and local participants
- Access to primary issuance markets
- Net risk basket trading often produces preferred results

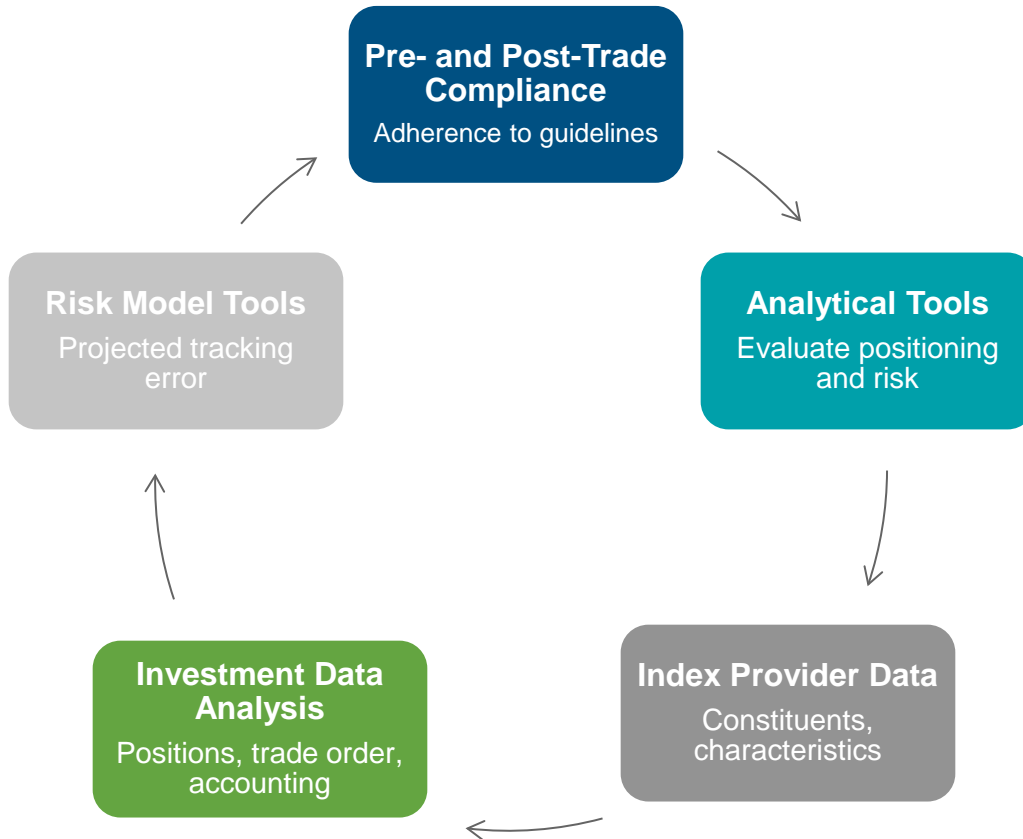
Intelligence

- Reduce market disruption through thoughtful portfolio implementation
- Component approach utilizing sector specialists
- Extensive knowledge of each sector and index rules
- Detailed comparison of index price vs. market valuation before trading

GLOBAL TECHNOLOGY PLATFORM

Advanced analytics shared across strategies / locations

Aladdin Capabilities:



- Centralized source of data
- Full investment process across market segments and security types
- Risk controls
- Reduced operational risk
- Scalability and customization

RISK MANAGEMENT

Continuous process examining portfolio risk, performance attribution and compliance.

Daily Reviews

Portfolio Management Team

- Observe projected tracking error
- Evaluate positioning, risks and costs
- Monitor changes in index constituents and characteristics
- Conduct pre-trade compliance
- System validation of holdings versus guidelines, in real time

Compliance Team

- OMS (Order Management Systems) Systems examine holdings vs. guidelines
- Conducts post-trade compliance

Periodic Reviews

Investment Governance Committee (Quarterly)

- Consists of senior investment and risk professionals across firm
- Review performance results and peer group
- Evaluate credit, liquidity, interest rate, regulatory and operational risk
- Review investment strategy decisions and governance

Asset Management Risk Committee (Monthly)

- Oversight and monitoring of investment, operational and regulatory risks
- Key members include Chief Risk Officer, Chief Compliance Officer and Chief Investment Officer

Transition Management

TRANSITION MANAGEMENT HIGHLIGHTS

A dedicated global team focused on providing customized solutions for clients

A Core Business

- Integrated with custody, asset management and administration
- Annual global firm trading volume of \$1.05 trillion (USD)

Proven Performance Results

- 30-year track record of innovative solutions
- 5-year event performance within 0.66 bps of cost estimate

Corporate Infrastructure and Support

- 24/6 trading capabilities
- Operations teams streamline trade process and setup

Transparent Reporting

- Robust pre- and post-trade reporting, including full cost attribution
- Third-party post-trade analytics

Recent Client Trends

- Majority of events between active managers (61% of 2018 events)
- Large increase in fixed income trading (128% YoY)

Average Annual Volume

US \$73.2
billion

Average Transition Size

US \$346.0
million

Total Events

1,057

Source: Northern Trust Investments, Inc.. Averages based upon prior 5 years. Data from global equity and fixed income transitions from January 2015 to December 2019.

TRANSITION MANAGEMENT GLOBAL TEAM

A global team focused on providing customized solutions for clients

Trade Desks:

London
Sydney
Chicago

Size:

20 TM Staff
27 Traders
40 Ops Staff
6 Supervision Officers

Avg. Experience:

22 Years in Industry
12 Years in TM
14 Years at NT

Proven Performance

- 32 year track record
- \$360 billion traded past five years
- 1,057 events past five years
- Beat shortfall estimate 96% of the time

Global Trading Staff

- Equities & Derivative (11 Traders)
- Fixed Income (8 Traders)
- Foreign Exchange (8 Traders)

Global Operations Staff

- Product Managers (3 Staff)
- Acct Set-up and Transfers (5 Staff)
- Settlements (7 Staff)
- Acct. Recon (4 Staff)
- Trade Support (7 Staff)
- Corporate Actions and Proxy (9 Staff)
- Derivatives Processing (5 Staff)

Supervision Officers

- Compliance (2 Staff)
- Risk (2 Staff)
- Legal (2 Staff)

Transition Management Staff

Global Head, Institutional Brokerage

Guy Gibson

Americas Head APAC & EMEA Head

Grant Johnsey Craig Blackburn

Business Development

Bill Kincaid Brendan McMahon
David McPhillips Mike Terzich

Strategists/ Portfolio Managers

Rob Baughard Mat Cook
Rob Dixon Gail Grove
Chris Honold Joe Martinez
Mike Mahoney Gavin Mashford
Laura Meldrum Kathy Scherer
Laurie Zajac

Analysts

Afshan Mohammed Finosh Najeeb
Ankita Agarwal Vikas Ramesh

THE NORTHERN TRUST DIFFERENCE

We leverage Northern Trust's asset servicing and asset management capabilities to reduce trading costs, manage risk and seamlessly implement asset restructuring events for our clients

High Quality Execution

- Agent-only trading
- All trading is in-house¹
- No information leakage
- 100% control over trading

Integrity

- Fiduciary oversight
- Transparency of revenue eliminates conflicts
- Extensive pre- and post-trade analysis



Risk Management

- Risk management strategy vs. liquidity driven strategy
- Identify sources of risk
- Use optimized/sequenced trading to reduce risk

Project Management

- Comprehensive project management
- Designated project manager
- Communication throughout the transition event

¹ Transition Management relies upon its affiliated broker dealers, NTSI and NTSL, for trade execution.

FOCUS ON TRADE EXECUTION

Northern Trust continues to invest in people and technology to serve a growing business



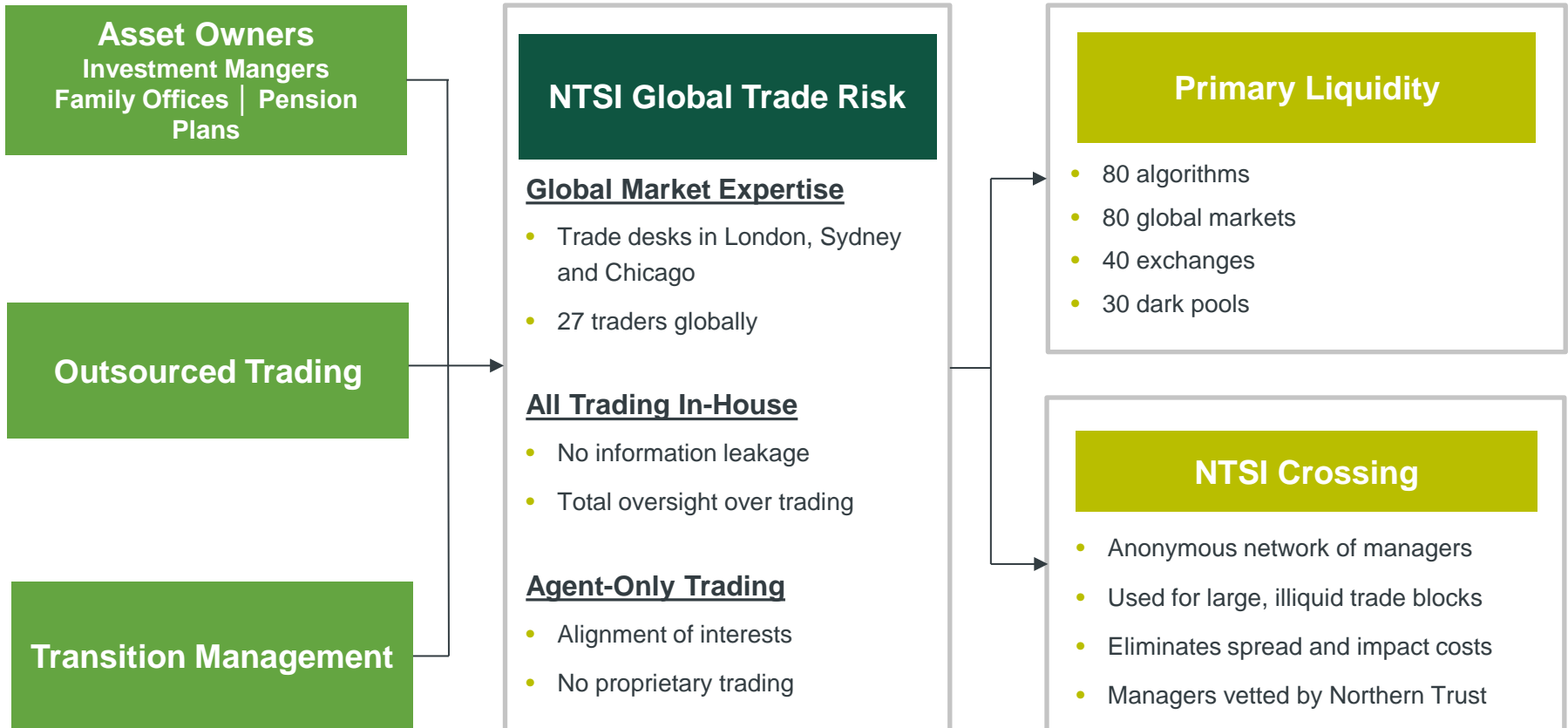
Clients



NORTHERN TRUST



Liquidity Sources



FOCUS ON RISK MANAGEMENT

We evaluate risks for every event and develop a unique strategy designed to help mitigate tracking error

Three key factors drive intraday volatility



Key Drivers:

- Portfolio beta
- Cash holdings
- Changes in benchmark

Key Drivers:

- Sector
- Style
- Country
- Currency
- Capitalization, etc.

Key Drivers:

- Portfolio concentration
- Size of holdings
- Stock-specific news

FIXED INCOME EXECUTION

Combining a broad client base with speed, accuracy, price discovery and trade automation

Broad Product Coverage

Commercial Paper

Government Debt

Agencies

Municipals

Bond Ladders

ABS/MBS

Corporate Bonds

Int'l/Sovereign Debt

Structured Notes

Anonymous bid solicitation

Leveraging our client base and industry relationships to provide quality pricing through our affiliated broker dealers:

- Broker-dealers
 - *300+ bulge bracket and regional dealers*
 - *Multi-bid solicitation to verify pricing*
- Asset owners
 - *1,300+ Northern Trust clients*
 - *Ultimate end-buyers*
- Electronic Platforms
 - *MarketAxess*
 - *Bloomberg*
 - *Bond Desk*
 - *Knight Bondpoint*
 - *Tradeweb*

KEY BENEFITS OF OUR TRANSITION MANAGEMENT BUSINESS

End-to-end project management that maximizes transparency and helps mitigate risk



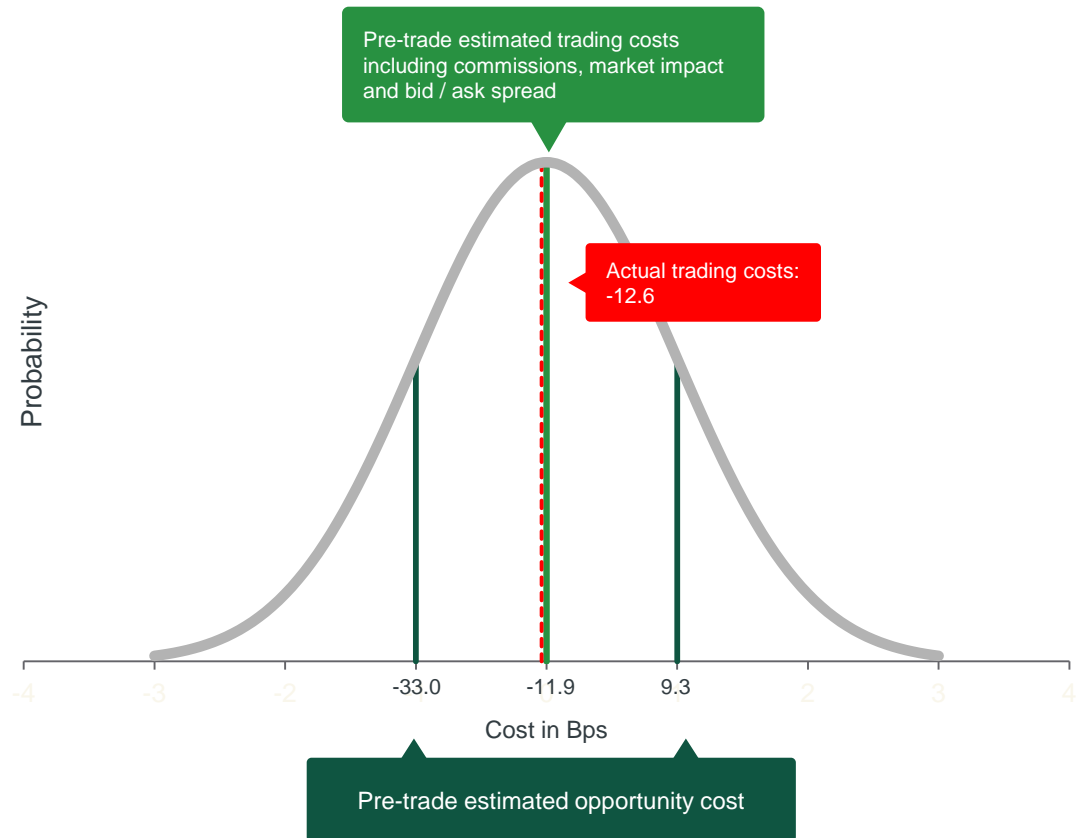
HISTORIC IMPLEMENTATION SHORTFALL RESULTS

Performance within 0.66 basis points of median cost estimate over the last five years



Data Parameters

- Global equity and fixed income
- Jan 2015 – Dec 2019
- 1,057 assignments
- Market value of \$366B USD
- Beat pre-trade shortfall estimate 96% of the time
- -0.66 bps represents 0.02 standard deviations from the median estimate



Past performance is no guarantee of future results

Source: Northern Trust Investments, Inc. Data from global equity and fixed income transitions from January 2015 to December 2019.

3-YEAR HISTORIC PERFORMANCE: REGIONAL ANALYSIS

Aggregate (2016-2018) cost comparison by region

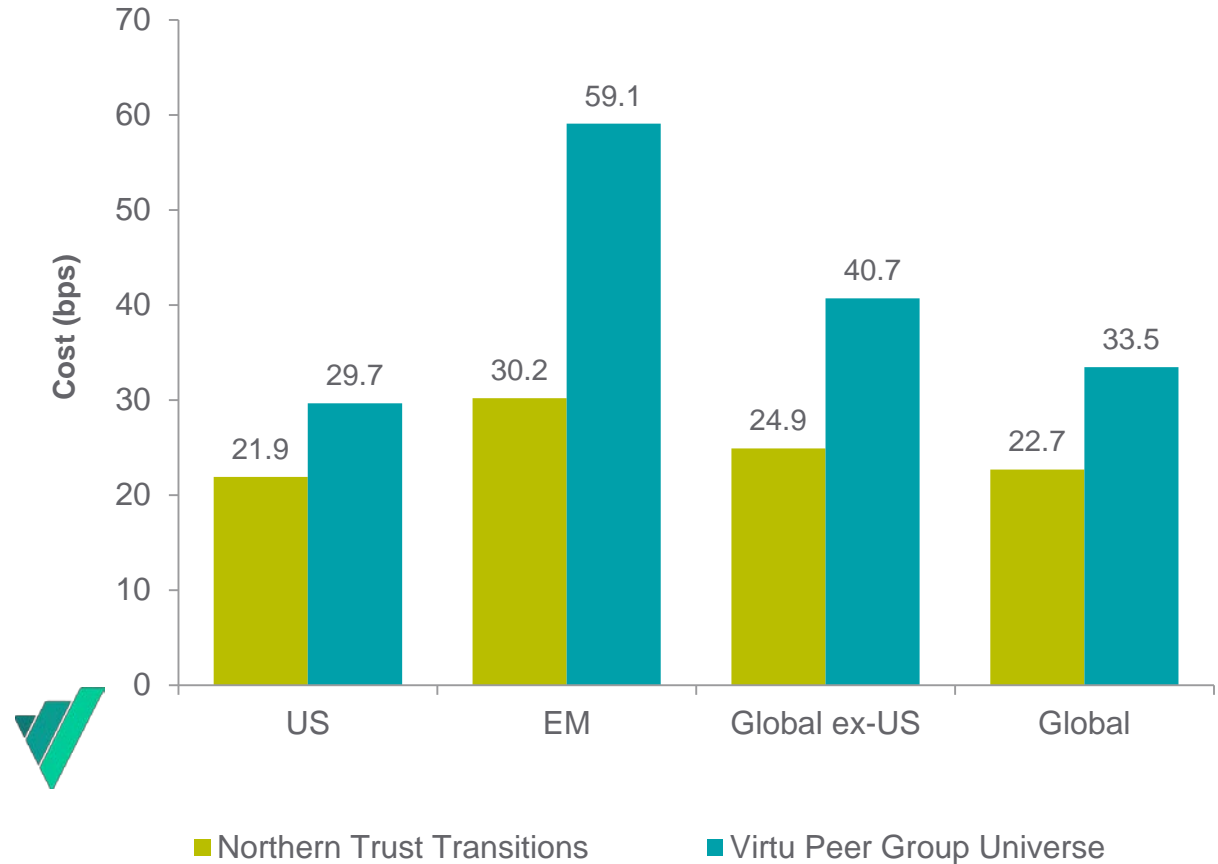
Virtu Peer Universe:

190

Investment Managers

\$13.3 T

Annual Trade Volume



Past performance is no guarantee of future results

Source: Virtu. Not to be reproduced or retransmitted without permission.

5-YEAR HISTORIC PERFORMANCE: REGIONAL ANALYSIS

Aggregate (2014-2018) cost comparison by region

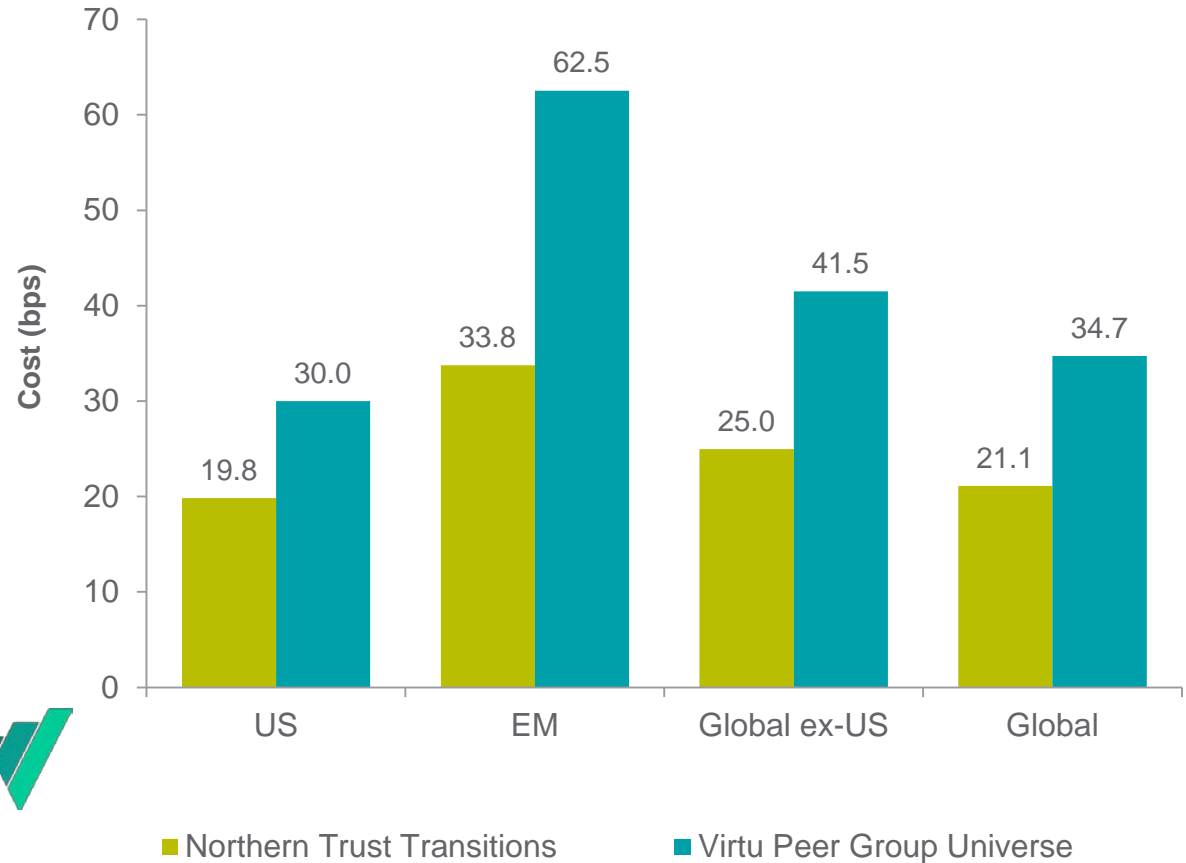
Virtu Peer Universe:

190

Investment Managers

\$13.3 T

Annual Trade Volume



Past performance is no guarantee of future results

Source: Virtu. Not to be reproduced or retransmitted without permission.

METHODOLOGY AND DEFINITIONS

- Virtu's Peer universe is comprised of approximately 175 buy side clients and \$2 trillion dollars of trading on a quarterly basis.
- Implementation shortfall (IS) cost, or slippage, is the difference between the arrival price and the execution price of a trade.
- All averages are volume weighted. Costs are denoted as positive values and negative costs are gains.
- Market capitalization breakdowns are as follows:
 - *Micro Cap: Less than \$250M*
 - *Small Cap: \$250M - \$2B*
 - *Mid Cap: \$2B - \$10B*
 - *Large Cap: Greater than \$10B*
- Order size group breakdowns are as follows:
 - *Largest Orders: Order % of MDV > 100%*
 - *Large Orders: Order % of MDV between 50% and 100%*
 - *Medium Orders: Order % of MDV between 20% and 50%*
 - *Small Orders: Order % of MDV between 1% and 20%*
- MDV is the 21-day median daily volume and is calculated from the trading day prior to the order start date.

Northern Trust Transition Management trading performance is compared to average trading performance of Virtu's Peer Group Universe, a universe composed of approximately 175 buy side clients and \$2 trillion of trading on a quarterly basis. All comparisons are based on Implementation Shortfall from order arrival through execution. Costs are denoted as positive values; negative costs represent gains. Only realized trades were included in the Northern Trust Transition Management average cost numbers; no other filtering was applied. Orders with costs greater than the absolute value of 10,000 bps were removed from all of Virtu's Peer Group Universe averages. Days to completion represents the average number of full trading days over the order horizon.

IMPORTANT INFORMATION

2018 One of the World's Most Admired Companies

Fortune's survey partners at Hay Group starts with approximately 1,500 companies: the Fortune 1,000 -- the 1,000 largest U.S. companies ranked by revenue; non-U.S. companies in Fortune's Global 500 database with revenues of \$10 billion or more. Hay then selects the highest-revenues companies in each industry, surveying a total of 680 companies from 28 countries. To create the 51 industry lists, Hay polled executives, directors and analysts to rate companies in their own industry on nine criteria, from investment value to social responsibility. A company's score must rank in the top half of its industry survey to be listed.

<http://fortune.com/worlds-most-admired-companies>

click on 'See our methodology and credits'

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Past performance is no guarantee of future results. Performance returns and the principal value of an investment will fluctuate. Performance returns contained herein are subject to revision by Northern Trust. Comparative indices shown are provided as an indication of the performance of a particular segment of the capital markets and/or alternative strategies in general. Index performance returns do not reflect any management fees, transaction costs or expenses. It is not possible to invest directly in any index. Gross performance returns contained herein include reinvestment of dividends and other earnings, transaction costs, and all fees and expenses other than investment management fees, unless indicated otherwise.

Forward-looking statements and assumptions are Northern Trust's current estimates or expectations of future events or future results based upon proprietary research and should not be construed as an estimate or promise of results that a portfolio may achieve. Actual results could differ materially from the results indicated by this information.

Securities products and services are sold by Registered Representatives of Northern Trust Securities, Inc. (member FINRA, SIPC), a wholly owned subsidiary of Northern Trust Corporation.

Northern Trust Transition Management trading performance is compared to average trading performance of Virtu's Peer Group Universe, a universe composed of approximately 175 buy side clients and \$2 trillion of trading on a quarterly basis. All comparisons are based on Implementation Shortfall from order arrival through execution. Costs are denoted as positive values; negative costs represent gains. Only realized trades were included in the Northern Trust Transition Management average cost numbers; no other filtering was applied. Orders with costs greater than the absolute value of 10,000 bps were removed from all of Virtu's Peer Group Universe averages. Days to completion represents the average number of full trading days over the order horizon.

All material has been obtained from sources believed to be reliable, but the accuracy, completeness and interpretation cannot be guaranteed. Information contained herein is current as of the date appearing in this material only and is subject to change without notice.

Northern Trust Asset Management is composed of Northern Trust Investments, Inc. Northern Trust Global Investments Limited, Northern Trust Global Investments Japan, K.K, NT Global Advisors Inc., 50 South Capital Advisors, LLC and investment personnel of The Northern Trust Company of Hong Kong Limited and The Northern Trust Company.

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Appendix

OUR CAPITAL MARKETS ASSUMPTIONS

Slow global growth can be positive for stocks and high-yield bonds.

FIVE-YEAR THEMES

1 Global Growth Restructuring

A shifting economic model – due to geopolitical and technological developments – will possibly slow down.

2 Irreconcilable Differences

The fractious U.S.-China relationship will likely produce a cascade of geopolitical, economic and market changes.

3 Stuckflation 4.0

Muted growth in global demand and timid policy responses suggest stuckflation is here to stay.

4 Executive Power Play

Solid growth has pacified power grab concerns, but leaders are at risk of overplaying their hands.

5 Monetary Makeover

Stuckflation has left central banks without a North Star and seeking relevance as their independence is challenged.

6 Staking Out Climate Risk

Climate risk regulatory impacts will likely slowly build, but will high dispersion and sporadic embracement.

USING A VEHICLE THAT SUITS YOUR NEEDS

Choosing the right vehicle can be as important as choosing the right benchmark. We offer a wide range of vehicles and can work with you to determine which one is right for you.

Traditional Open Ended Index Funds (ICVC)

- Dublin domiciled
- Diverse range

Common Contractual Funds (CCF)

- Dublin Domiciled
- Tax Efficient
- Diverse range

Fonds voor Gemene Rekening (FGR)

- Dutch domiciled
- Tax Efficient
- Diverse range

US Institutional Commingled Funds

- Collective Investment Trusts (CITs)
- Common Funds

US Registered Mutual Funds

- Northern Funds family
- Diverse range

Separately Managed Accounts

- Customized to meet your unique needs

Exchange Traded Funds (ETFs)

- Equity
- Fixed Income
- Real Assets

U.S. EQUITY INDEX COLLECTIVE FUNDS

| Collective Fund | Benchmark Index | Lending | Non-Lending |
|--|---------------------------------------|---------|-------------|
| U.S. LARGE/MID CAP | | | |
| S&P 500 | S&P 500 | ✓ | ✓ |
| S&P 500 Style (Value/Growth) | S&P 500 Value/Growth | ✓ | |
| S&P Midcap 400 | S&P 400 | ✓ | ✓ |
| MSCI USA | MSCI USA | | ✓ |
| Russell 1000 | Russell 1000 | ✓ | ✓ |
| Russell 1000 Value | Russell 1000 Value | ✓ | ✓ |
| Russell 1000 Growth | Russell 1000 Growth | ✓ | ✓ |
| U.S. SMALL CAP | | | |
| Russell 2000 | Russell 2000 | ✓ | ✓ |
| Russell 2000 Value | Russell 2000 Value | ✓ | ✓ |
| Russell 2000 Growth | Russell 2000 Growth | ✓ | ✓ |
| MSCI U.S. Small Cap | MSCI U.S. Small Cap | | ✓ |
| U.S. SMID CAP/COMPLETION STRATEGIES | | | |
| Small Cap Completeness | Russell Small Cap Completeness | ✓ | |
| Extended Equity Market | DJ U.S. Completion Total Stock Market | ✓ | ✓ |
| U.S. ALL CAP | | | |
| Total Stock Market | DJ U.S. Total Stock Market | ✓ | ✓ |
| Russell 3000 | Russell 3000 | ✓ | ✓ |
| U.S. Investable Market | MSCI U.S. IMI | ✓ | ✓ |

INTERNATIONAL/GLOBAL EQUITY INDEX COLLECTIVE FUNDS

| Collective Fund | Benchmark Index | Lending | Non-Lending |
|---|---|---------|-------------|
| INTERNATIONAL – LARGE/MID CAP | | | |
| EAFE | MSCI EAFE | ✓ | ✓ |
| Canada | MSCI Canada | | ✓ |
| World ex-U.S. | MSCI World ex-U.S. | | ✓ |
| ACWI ex-U.S. | MSCI ACWI ex-U.S. | ✓ | ✓ |
| Emerging Markets | MSCI Emerging Markets | ✓ | ✓ |
| INTERNATIONAL – ALL CAP | | | |
| ACWI ex-U.S. IMI | MSCI ACWI ex-U.S. Investable Market | ✓ | ✓ |
| World ex-U.S. IMI | MSCI World ex-U.S. Investable Market | ✓ | ✓ |
| Emerging Markets IMI | MSCI Emerging Markets Investable Market | | ✓ |
| GLOBAL – LARGE/MID & ALL CAP | | | |
| World | MSCI World | | |
| World IMI | MSCI World IMI | | |
| ACWI | MSCI ACWI | | ✓ |
| ACWI IMI | MSCI ACWI Investable Market | ✓ | ✓ |
| Global Real Estate | FTSE EPRA/NAREIT Global Real Estate | ✓ | ✓ |
| INTERNATIONAL – SMALL CAP | | | |
| Developed International Small Cap | MSCI World ex-U.S. Small Cap | ✓ | ✓ |
| EAFE Small Cap | MSCI EAFE Small Cap | | ✓ |
| Canada Small Cap | MSCI Canada Small Cap | | ✓ |
| Emerging Markets Small Cap | MSCI Emerging Markets Small Cap | | ✓ |

FIXED INCOME INDEX COLLECTIVE FUND AVAILABILITY

| Collective Fund | Benchmark Index | Lending | Non-Lending |
|-------------------------------------|---|---------|-------------|
| U.S. FIXED INCOME | | | |
| Aggregate | Barclays Aggregate Bond | ✓ | ✓ |
| Gov/Credit | Barclays Gov/Credit | ✓ | |
| Intermediate Gov/Credit | Barclays Intermediate Gov/Credit | ✓ | |
| Long Term Gov/Credit | Barclays Long Term Gov/Credit | ✓ | ✓ |
| Short Term Gov | Barclays Short Term Gov | ✓ | ✓ |
| Intermediate Gov | Barclays Intermediate Gov | ✓ | ✓ |
| Long Term Gov | Barclays Long Term Gov | ✓ | ✓ |
| 1-5 Year Credit | Barclays 1-5 Year Credit | | ✓ |
| Credit Bond | Barclays Credit Index | ✓ | |
| Intermediate Credit | Barclays Intermediate Credit | ✓ | ✓ |
| Long Term Credit | Barclays Long Term Credit | ✓ | ✓ |
| Long Term Corporate | Barclays Long Term Corporate | | ✓ |
| Long Term Non Corporate Credit | Barclays Long Term Non Corporate Credit | | ✓ |
| Mortgage Backed Securities | Barclays MBS | | ✓ |
| Asset-Backed Securities | Barclays ABS | | ✓ |
| Commercial MBS | Barclays CMBS | | ✓ |
| TIPS | Barclays U.S. TIPS | ✓ | ✓ |
| 1-10 Year TIPS | Barclays 1-10 Year U.S. TIPS | | ✓ |
| INTERNATIONAL FIXED INCOME | | | |
| World Government Bond Index ex U.S. | Citigroup World Govt Bond Index ex U.S. | | ✓ |

EMERGING MARKET INVESTMENT SOLUTIONS

FAST FACTS

Approximately \$30 Billion of emerging markets (EM) AUM¹

15 years of expertise with emerging markets

Managing over 40 EM countries (Including frontier markets)

Scaled funds with daily liquidity

OUR ADVANTAGE

Unique approach focused on managing critical risks within the asset class; operational, regulatory/sovereign/market risks and transaction costs.

Pioneering advanced governance screening for emerging market equities

Innovative solutions that extend beyond traditional markets, offering a thoughtful solution to Frontier Markets

OVERVIEW OF EMERGING MARKET CAPABILITIES

Integrated Solutions

- MSCI All Country Index
- MSCI All Country Investable Market Index (IMI)
- FTSE EPRA/NAREIT Global Index
- MSCI ACWI Diversified Factor Index

Dedicated Solutions

- MSCI Emerging Markets
- MSCI Emerging Markets Small Cap
- MSCI Emerging Markets Investable Market (IMI)
- Custom S&P 150 Frontier Market Index

ESG Solutions

- Emerging Markets Custom Low Carbon Index
- Emerging Markets Custom Governance ESG Index

Represents total assets managed by Northern Trust as of 12/31/2019.

¹All data as of December 31, 2019, unless otherwise noted.

GLOBAL REAL ESTATE INVESTMENT SOLUTIONS

FAST FACTS

Over \$9 Billion in AUM¹

12 years of expertise

Managing in 40 countries

11 Daily Valued Commingled Funds

OUR ADVANTAGE

Unique approach focused on managing critical risks within the asset class; operational, regulatory/sovereign/market risks and transaction cost.

Pioneering advanced ESG screens for real estate equities

Innovative solutions that include quantitative designs

OVERVIEW OF GLOBAL REAL ESTATE CAPABILITIES

Passive Solutions

- FTSE EPRA/NAREIT Global Index
 - Institutional Commingled Fund
 - DC Vehicle
- MSCI ACWI IMI Core Real Estate Index
- NT Developed Real Estate ESG Index

Quantitative Solutions

- Global Quality Real Estate Strategy

ESG Solutions

- NT Developed Real Estate ESG Fund
 - FGR structure

Represents total assets managed by Northern Trust as of 12/31/2019.

¹All data as of December 31, 2019, unless otherwise noted.

SUSTAINABLE INVESTING

Innovative solutions across the spectrum of ESG criteria and using quantitative strategies seeking to achieve competitive risk-adjusted returns

FAST FACTS

30+ years of expertise

\$100.4 Billion AUM¹

Manage 3 of the top 10 largest ESG index funds globally²

Principles for Responsible Investment (PRI) member since 2009

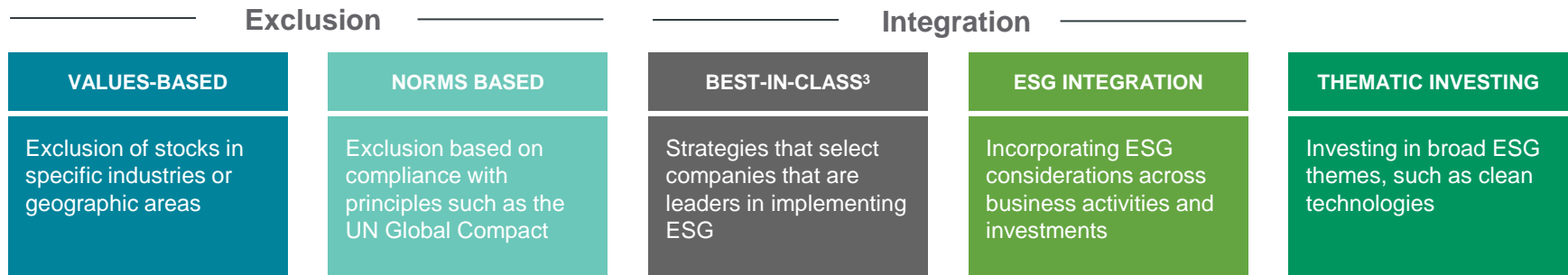
OUR ADVANTAGE

Unique approach that combines investor values with leading market expertise

Pioneering advanced governance screening for emerging market equities and ESG integration into REITs

Innovative solutions that leverage our deep expertise in passive and factor-based investing

OUR SPECTRUM OF ESG CAPABILITIES SOLUTIONS



Proxy Voting Policies & Engagement

Represents total assets managed by Northern Trust as of 12/31/19. Gross returns

¹ All data as of December 31, 2019, unless otherwise noted.

² Source: eVestment. Data as of September 30, 2019. Universe for comparison consists of 37 total passive equity products within "All ESG Universe".

³ Best-in-class ESG is industry terminology referring to an investment approach that selects companies that are leaders in implementing ESG.

Past performance is no guarantee of future results. Index performance returns do not reflect any management fees, transaction costs or expenses. It is not possible to invest directly in any Index.

LIQUIDITY SOLUTIONS

Delivering cash management expertise to help your clients successfully navigate changing rate and regulatory environments.

FAST FACTS

\$242.1B AUM¹

2nd Largest institutional cash manager in the U.S.²

OUR ADVANTAGE

Portfolio construction driven by deep research, resulting in solutions focused on safety, liquidity and yield

Skilled in creating customized global solutions, across multiple investment vehicles and currencies

Experienced team managing liquidity solutions for more than 40 years

CASH SEGMENTATION

Changes in the global liquidity market require investors to adopt a more strategic and focused approach to liquidity management — moving beyond a one-size-fits-all approach.

Operational

(1- to 30-day maturities)

Day-to-day spending needs

Highly liquid, invested conservatively

PRODUCT TYPE:

Money market fund

Reserve

(1- to 90-day maturities)

Intermediate or uncertain spending needs

Slightly reduced liquidity

PRODUCT TYPE:

Money market fund
Custom strategy

Strategic

(6- to 18-month maturities)

Long-term spending needs

Reduced liquidity

Seeks highest possible yield while preserving principal

PRODUCT TYPE:

Ultra-short
Custom strategy

All data as of December 31, 2019, unless otherwise noted.

¹ Liquidity Solutions AUM does not include \$4.4B of Multi-Manager Solutions Assets.

² Total worldwide assets under management. The above rankings are not indicative of future performance. Unless otherwise noted, rankings are based on total worldwide assets under management of \$885 billion as of December 31, 2018 by Pensions & Investments magazine's 2019 Special Report on the Largest Money Managers.

PROXY VOTING & ENGAGEMENT TEAM

Our team has expanded from two to three analysts, with closer integration of equity research resource

The Proxy Voting & Engagement team is complemented by a team of 12 Equity Research Analysts and a Proxy Voting Committee that is responsible for our stewardship policies and initiatives; it deliberates engagements and votes in the best interests of our clients

PROXY VOTING & ENGAGEMENT TEAM

Jacob C. Weaver, CFA, CPA
Head of Index Equity and Proxy Voting & Engagement

Catherine Moyer
Sr. Proxy and Engagement Specialist

Julia Kochetygova
Head of EMEA Stewardship

Neaaz Mozumder
Proxy and Engagement Specialist

Equity Research Team
12 Analysts, by sector

PROXY VOTING COMMITTEE & SUPPORT

Jacob C. Weaver, CFA, CPA (Chair)
Head of Index Equity and
Proxy Voting & Engagement

Mamadou-Abou Sarr, CFA
Senior Vice President
Global Head ESG Investing

Connie Lindsey
Executive Vice President
Head of Corporate Social Responsibility,
Global Diversity & Inclusion

Emily Lawrence
Vice President
Sustainable Investing Specialist

Michael J. Towle, CFA
Vice President
Investment Research

John B. Leo, CFA
Senior Vice President
Director, Personal Investment Services

Christopher Shipley
Senior Vice President
Director of Research, Active Equity

Geoffrey Doggart
Vice President
Risk & Compliance

Paula McManus
Sr. Relationship Manager
NTAM EMEA

Peter Zymali, CFP
Senior Vice President
Senior Portfolio Manager

Dave S. Kempers
Legal Counsel

PROXY VOTING

We generally encourage reporting that provides meaningful information to enable shareholders to evaluate the impact of the company's policies and practices.

Environmental



Environmental Impact

GHG Emissions and Fracturing

Energy Efficiency

Social



Product Safety & Animal Welfare

Diversity

Equal Employment Opportunity

Corporate Sustainability

Governance



Board Composition & Structure

Contested Director Elections

Shareholder Rights

Compensation

Mergers & Acquisition

Board and Audit Accountability

Considered and thoughtful approach on ESG

PROXY VOTING

We advocate for strong corporate governance practices that we believe will create and sustain long-term value for our clients.

Governance Focus

| Board Composition | Board Structure | Contested Director Elections | Shareholder Rights | Compensation | Mergers & Acquisitions | Board and Audit Accountability |
|---|--|---|---|--|---|---|
| <p>May oppose incumbent directors serving on nominating committee where concerns arise as to the composition of the board.</p> <p>May oppose director nominees who are CEO and sit on more than two public boards, or who are non-CEO and sit on more than four public boards.</p> <p>May oppose incumbent director nominees who attend fewer than 75% of board and board-committee meetings for two consecutive years.</p> | <p>Expect principal board committees (audit, compensation, nomination and governance) to be comprised solely of independent directors; and the board be comprised of a majority independent directors.</p> <p>Support an annual election of directors over staggered board structure.</p> <p>Support appointment of a lead independent director where role of board chair is filled by non-independent director.</p> | <p>Evaluate case-by-case, considering:</p> <ul style="list-style-type: none"> • Long-term financial performance of the target company relative to peers; • Management's track record; • Qualifications of director nominees (both slates); • Evaluation of each side's objectives, goals and potential motivations; and • Stock ownership positions. | <p>Support shareholder right to call special meetings if the minimum ownership threshold is at least 10% of outstanding shares.</p> <p>Support proxy access.</p> <p>Support elimination of supermajority vote standards to approve charter and bylaw amendments</p> <p>Support shareholder proposals that ask a company to submit its poison pill for shareholder ratification.</p> | <p>Generally supportive of annual frequency of advisory votes on executive compensation.</p> <p>Examine advisory votes concerning the compensation of named executive officers on a case-by-case basis, taking into account pay structure in relation to firm performance, problematic governance practices, and the company's overall transparency and level of responsiveness to shareholder concerns.</p> | <p>Evaluates case-by-case, considering:</p> <ul style="list-style-type: none"> • Anticipated financial and operating benefits; • Offer Price (cost vs. premium); • Prospects of the combined companies; • How the deal was negotiated; and • Changes in corporate governance and their impact on shareholder rights. | <p>May oppose auditor ratification or re-election of incumbent members of audit committee if non-audit fees are excessive in relation to audit-fees.</p> <p>May oppose one or more directors where the board of directors has failed to adequately respond to:</p> <ul style="list-style-type: none"> • majority approved shareholder proposal; or • failed management proposal on executive compensation; <p>May oppose one or more directors for failing to adequately guard against or manage ESG risks.</p> |

PROXY VOTING

We generally encourage reporting that is not unduly costly or burdensome and which does not place the company at a competitive disadvantage, but which provides meaningful information to enable shareholders to evaluate the impact of the company’s environmental, social and governance policies and practices on its financial performance.

Social and Environmental Focus

| Diversity | Equal Employment Opportunity | Environmental Impact | Corporate Sustainability | GHG Emissions and Fracturing | Energy Efficiency | Product Safety & Animal Welfare |
|--|--|--|---|---|--|--|
| <p>Support requests that a company take reasonable steps to ensure women and minority candidates are in the pool from which board nominees are chosen or that request that women and minority candidates are routinely sought as part of every board search the company undertakes.</p> <p>May oppose incumbent directors serving on nominating committee where concerns arise as to the diversity of the board.</p> | <p>Support proposals advocating the elimination of workplace discrimination based on sexual orientation or gender identity.</p> <p>Support disclosure and reporting regarding workforce diversity and diversity initiatives.</p> | <p>Support requests for increased disclosure regarding the environmental impact of a company’s operations and products and initiatives to curtail these risks.</p> | <p>Support the issuance of corporate sustainability reports.</p> <p>NEW: Support increased disclosure of a company’s policies and procedures for managing and mitigating risks related to cyber security and data privacy.</p> <p>NEW: Support increased disclosure on a company’s supply chain policies and practices and its management of related risks on a case-by-case basis.</p> | <p>Support disclosure concerning the emission of greenhouse gasses and the use of fracturing in connection with the extraction of natural gasses.</p> <p>Support adoption of GHG reduction targets from products and operations where companies are at higher risk.</p> | <p>Support issuance of reports by a company detailing its energy efficiency plans.</p> | <p>Support reporting or assessment of the safety of a company’s products and services and efforts to promote their safe use.</p> <p>Support disclosure and reporting regarding animal treatment issues that may impact a company’s operations and products, especially in relation to food production.</p> |

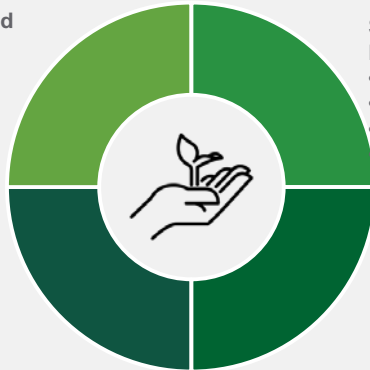
..... Considered and thoughtful approach on ESG

ENGAGEMENT EXAMPLES JULY 2018 – JUNE 2019

Climate Change

Scenario Planning and Strategic Reporting

- Boeing
- Chevron
- ExxonMobil
- Duke Energy
- Valero



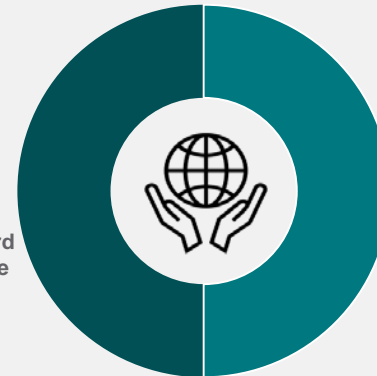
Set GHG Emissions Reduction Target

- C.H. Robinson
- Illinois Tool Works
- Flowserve
- Ross Stores

Human Capital Management

Board Diversity

- AvalonBay Communities
- Century Link
- FLIR Systems
- PACCAR
- Quest Diagnostics



Report on Workforce Diversity

- Applied Materials, Inc.
- The Charles Schwab Corporation

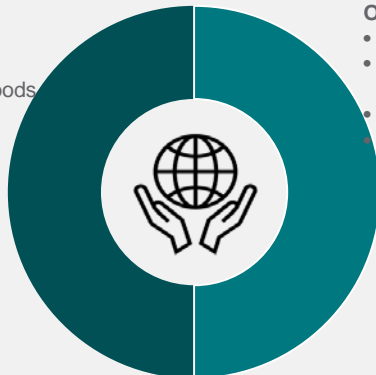
Disclosure of Board Skills & Experience

- ExxonMobil

Product Safety

Gun Safety

- American Outdoor Brands
- Dick's Sporting Goods
- Sturm, Ruger & Company, Inc.



Opioid

- Cardinal Health
- Endo International
- McKesson Corp
- Walgreens

Governance and Executive Compensation

Independent Board Chair

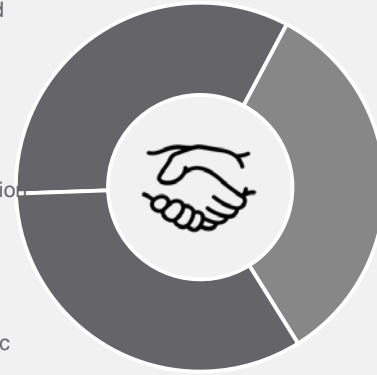
- Allergan Plc
- Facebook

Board Succession Planning and Leadership Transition

- Wells Fargo
- Honeywell

Board Size and Rotation:

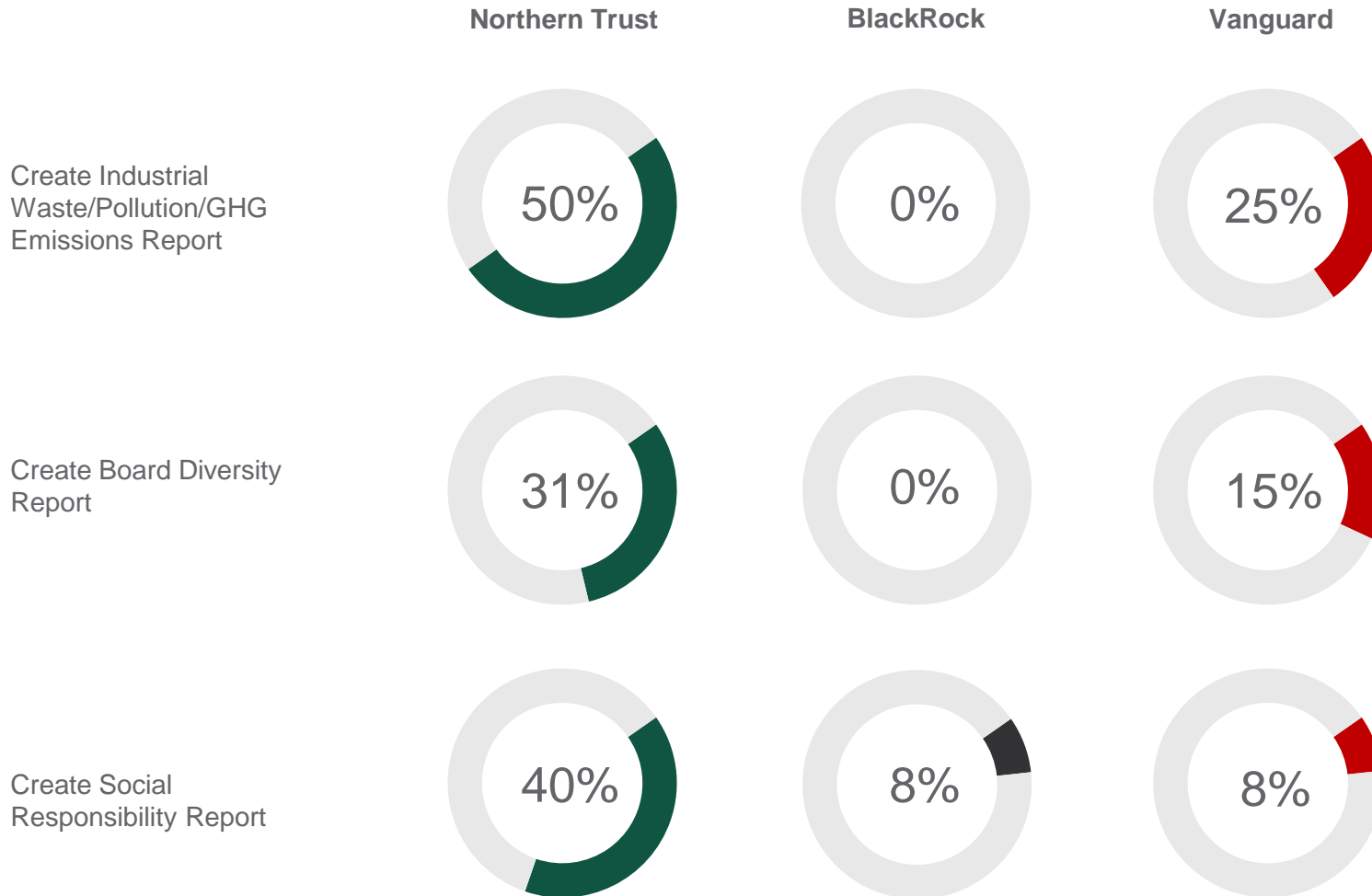
- General Electric



Remuneration Report

- Allergan Plc
- American International Group, Inc.
- Ameriprise Financial
- Facebook
- Mondelez International, Inc.
- Oracle Corp.
- Schlumberger NV
- United Therapeutics Corp.
- Wynn Resorts
- Zimmer Biomet Holdings, Inc.

SUPPORT FOR E&S PROPOSALS (JULY 2018 – JUNE 2019. RUSSELL 3000)



The percentages shown above show how many of the global shareholder proposals we supported during the last voting season compared to our peers

SOURCE: Proxy Insight;

PROXY VOTING & ENGAGEMENT POLICIES

We have pointed policies and principles targeted at upholding stewardship and the best interest of our shareholders



CORPORATE GOVERNANCE AND ENGAGEMENT PRINCIPLES

Since 1889, Northern Trust has been guided by our principles of service, expertise and integrity.

At Northern Trust, our primary objective as an asset manager is to create long-term value for our clients. This objective applies to all of our portfolio management decisions, including operating as a socially responsible investor and engaging with company management and boards of directors. Northern Trust believes that being an engaged owner will help portfolio companies produce sustainable value, and that companies' long-term financial returns are connected to their strategic, environmental, social and governance performance.

Being a socially responsible company directly contributes to our financial success and creates value for our global stakeholders.

GOVERNANCE AND OVERSIGHT

The Northern Trust Proxy Committee is responsible for oversight of the Corporate Governance and Engagement Principles and practices. The Chair of the Proxy Committee, in coordination with the Proxy Analyst team, Equity Analyst team and the Head of Environmental, Social and Governance (ESG) Investing, implements the engagement program. Northern Trust's Investment Governance Committee, which is responsible for investment governance and performance matters for managed accounts and funds of Northern Trust Corporation and its subsidiaries, provides oversight to the Proxy Committee. In addition, Northern Trust has a Corporate Social Responsibility Committee within our Board of Directors as well as a Head of Corporate Social Responsibility, who is a member of our Proxy Committee and who reports directly to the company CEO.

SCOPE AND OBJECTIVES FOR ENGAGEMENT

Engagement with management is a core part of the equity research process. Northern Trust's equity research analysts engage with hundreds of companies annually. The focus of these engagements is to

Northern Trust Asset Management
NTAC:3NS-20



PROXY VOTING POLICIES, PROCEDURES AND GUIDELINES

11/30/2017

These policies and procedures (and the guidelines that follow) apply to the voting of proxies by Northern Trust Corporation affiliates ("Northern Trust") for accounts over which Northern Trust has been granted proxy voting discretion.

NTAC:3NS-20



SUSTAINABLE INVESTING PHILOSOPHY

We believe in appropriate stakeholder engagement on environmental, social and corporate governance issues that create long-term value for our clients. Northern Trust uses a proxy voting strategy that aligns with the fundamental principle of sustainability, meaning the ability of future generations to meet their own needs. Our objective is to contribute to sustainable long-term value creation through the long-term financial health of our clients and shareholders in alignment with a healthy global environment, a stable society and well-governed, well-managed companies that best fit our clients' investment objectives. Our objective is to contribute to sustainable long-term value creation through the long-term financial health of our clients and shareholders in alignment with a healthy global environment, a stable society and well-governed, well-managed companies that best fit our clients' investment objectives.

As Northern Trust, we believe responsible investing is a core part of our stewardship and fiduciary duty. We are committed to the long-term financial health of our clients and shareholders in alignment with a healthy global environment, a stable society and well-governed, well-managed companies that best fit our clients' investment objectives.

NTAC:3NS-20

ABOUT THE PRESENTERS



David Alongi, CFA
Director, Head of Fixed Income Index Strategy

David is a Senior Vice President responsible for leading the portfolio management and trading process for passive fixed income portfolios. He oversees the management of a variety of commingled and segregated account strategies across a wide range of bond market sectors, maturities, and currencies.

David joined the asset management arm of Northern Trust in 2000. Prior to his current position, David was responsible for research, security selection and trading in the mortgage-backed sector, and was the portfolio manager for the Collective Mortgage Backed Securities Index Fund and various separate account client portfolios. In an earlier assignment, David was in the Treasury Department of The Northern Trust Company where he was responsible for interest rate risk management and hedging strategies for the balance sheet, and managed the bank investment portfolio. David began his career with Northern Trust in 1990.

David earned a BS in Psychology from the University of Illinois (Urbana) and an MBA with a concentration in Finance from The University of Chicago Booth School of Business. He is a CFA charter holder, a member of the CFA Institute and the CFA Society of Chicago, and an Associated Person of the National Futures Association.



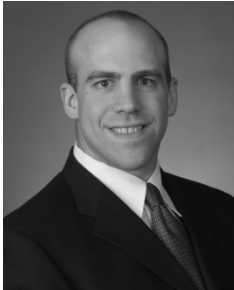
Mac Nickey
Director, Public Funds

William "Mac" Nickey is Director of Public Funds at Northern Trust Institutional Asset Management. He is responsible for marketing investment solutions and services to Public Fund and Taft-Hartley clients. As the relationship advisor and advocate, Mac focuses on developing long-term, rewarding partnerships. On an ongoing basis, he serves as the client's strategist and facilitator by managing Northern Trust's commitment to the client; addressing client issues to ensure appropriate resources are dedicated to the relationship; and establishing a solid business relationship.

Prior to becoming an Investment Relationship Manager within NTI, Mac was a Relationship Manager for the Global Securities Lending Group, specializing in the Public Fund and Taft-Hartley market segments. Before his client relationship responsibilities, Mac acted as borrower liaison and was responsible for securities lending borrower relationship management. He joined Northern Trust in 1986 as the senior government trader in Securities Lending. Before joining Northern Trust, Mac worked as an account executive at Smith Barney, Harris Upham and Co., Inc. specializing in fixed income securities.

Mac received a B.A. degree from the University of Virginia and an M.B.A. degree from the University of Chicago Graduate School of Business. He is registered with the Financial Industry Regulatory Authority and holds Series 3, 7, 30 and 63 licenses

ABOUT THE PRESENTERS



Jacob C. Weaver, CPA, CFA
Director, Global Equity

Jacob Weaver is a Director on the Global Equity team, where he is responsible for the Global Equity Index, Tax Advantaged Equity and some Quantitative Strategies portfolio management teams as well as the Proxy Voting and Engagement teams.

Prior to rejoining the Global Equity team in Chicago in 2010, Jake was the Head of International Indexing in Northern Trust's London office, overseeing a team of portfolio managers investing to various international indexes. Prior to this role, Jake spent six years as a portfolio manager focused on Tax Advantaged Equity and various quantitative strategies including Quality Small Cap Core.

Jake received a B.S. degree in Finance from the University of Illinois at Urbana-Champaign and an MBA from the University of Chicago Booth School of Business with concentrations in Finance and Organizational Behavior. He is a CFA charterholder and a Certified Public Accountant. He is a member of the CFA Society of Chicago and the CFA Institute.



Bill Kincaid
Director, Transition Management

Bill is Director of Sales & Relationship Management for North American clients. His responsibilities include business development and ensuring client satisfaction. Bill's role includes engagement with clients, investment boards, and investment consultants. Prior to joining Northern Trust, Bill spent over 20 years in the institutional brokerage, asset management, and asset servicing industry, and recently was part of the transition management sales team at BNY ConvergeEx. Bill graduated from Duquesne University in 1988 with a degree in Accounting & Finance. Bill is a NASD Series 7 and 63 Registered Representative.

Bill earned a B.S. degree from Duquesne University and holds Series 7 and 63 Licenses.

IMPORTANT INFORMATION

The information contained herein is intended for use with current or prospective clients of Northern Trust Investments, Inc. The information is not intended for distribution or use by any person in any jurisdiction where such distribution would be contrary to local law or regulation. Northern Trust and its affiliates may have positions in and may effect transactions in the markets, contracts and related investments different than described in this information. This information is obtained from sources believed to be reliable, and its accuracy and completeness are not guaranteed. Information does not constitute a recommendation of any investment strategy, is not intended as investment advice and does not take into account all the circumstances of each investor. Opinions and forecasts discussed are those of the author, do not necessarily reflect the views of Northern Trust and are subject to change without notice.

This report is provided for informational purposes only and is not intended to be, and should not be construed as, an offer, solicitation or recommendation with respect to any transaction and should not be treated as legal advice, investment advice or tax advice. Recipients should not rely upon this information as a substitute for obtaining specific legal or tax advice from their own professional legal or tax advisors. References to specific securities and their issuers are for illustrative purposes only and are not intended and should not be interpreted as recommendations to purchase or sell such securities. Indices and trademarks are the property of their respective owners. Information is subject to change based on market or other conditions.

All securities investing and trading activities risk the loss of capital. Each portfolio is subject to substantial risks including market risks, strategy risks, adviser risk and risks with respect to its investment in other structures. There can be no assurance that any portfolio investment objectives will be achieved, or that any investment will achieve profits or avoid incurring substantial losses. No investment strategy or risk management technique can guarantee returns or eliminate risk in any market environment. Risk controls and models do not promise any level of performance or guarantee against loss of principal. Any discussion of risk management is intended to describe Northern Trust's efforts to monitor and manage risk but does not imply low risk.

Past performance is no guarantee of future results. Performance returns and the principal value of an investment will fluctuate. Performance returns contained herein are subject to revision by Northern Trust. Comparative indices shown are provided as an indication of the performance of a particular segment of the capital markets and/or alternative strategies in general. Index performance returns do not reflect any advisory fees, transaction costs or expenses. It is not possible to invest directly in any index. Performance returns are reduced by investment management fees and other expenses relating to the management of the account. Performance returns contained herein include reinvestment of dividends and other earnings, transaction costs, and all fees and expenses other than investment management fees, unless indicated otherwise. Gross performance returns do not reflect the deduction of investment advisory fees and returns will therefore be reduced by these and any other expenses occurred in the management of the account. For additional information on fees, please refer to Part 2a of the Form ADV or consult a Northern Trust representative.

Forward-looking statements and assumptions are Northern Trust's current estimates or expectations of future events or future results based upon proprietary research and should not be construed as an estimate or promise of results that a portfolio may achieve. Actual results could differ materially from the results indicated by this information.

If presented, hypothetical portfolio information provided does not represent results of an actual investment portfolio but reflects representative historical performance of the strategies, funds or accounts listed herein, which were selected with the benefit of hindsight. Hypothetical performance results do not reflect actual trading. No representation is being made that any portfolio will achieve a performance record similar to that shown. A hypothetical investment does not necessarily take into account the fees, risks, economic or market factors/conditions an investor might experience in actual trading. Hypothetical results may have under- or over- compensation for the impact, if any, of certain market factors such as lack of liquidity, economic or market factors/conditions. The investment returns of other clients may differ materially from the portfolio portrayed. There are numerous other factors related to the markets in general or to the implementation of any specific program that cannot be fully accounted for in the preparation of hypothetical performance results. The information is confidential and may not be duplicated in any form or disseminated without the prior consent of Northern Trust.

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Northern Trust Asset Management is composed of Northern Trust Investments, Inc. Northern Trust Global Investments Limited, Northern Trust Fund Managers (Ireland) Limited, Northern Trust Global Investments Japan, K.K, NT Global Advisors Inc., 50 South Capital Advisors, LLC and investment personnel of The Northern Trust Company of Hong Kong Limited and The Northern Trust Company.

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