

March 11th, 2020

BlackRock[®]

State of Connecticut

BlackRock's Proposal for Passive Investment Management Partnership

With You Today



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I. BlackRock Strategic Partnership

Why Choose BlackRock to be your Strategic Partner?



Global Leader in Indexing

- Manage \$4.5 trillion in indexed assets, with over \$1 trillion on behalf of pension plans.
- Strong track record spanning four decades, demonstrating the ability to manage to a wide range of benchmarks.



Holistic Partnership Approach

- Competitive fee arrangement in consideration of our broader partnership.
- Ability to provide custom solutions incorporating ESG considerations and an emphasis on emerging broker utilization.
- Partnership capabilities in related services, including transition management and risk management.



Shared Values

- Demonstrated firm level commitment to ESG and Inclusion & Diversity.
- Emerging Broker program focused on supporting the growth and development of the Emerging Broker ecosystem.

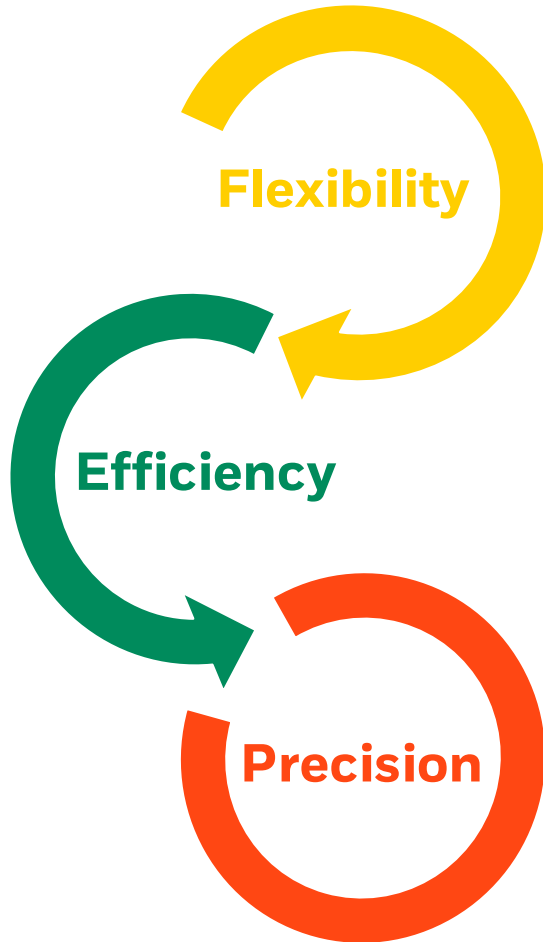


Risk Management Technology

- Our robust indexing platform is supported by our unparalleled proprietary investment and risk analytics platform, Aladdin.
- Investment teams leverage the benefits of our unifying technology and industry leading risk management capabilities to deliver superior indexing.

II. BlackRock Index Investments Overview

BlackRock's Index proposition



- ▶ Provide you with a broad range of market exposures together with a flexible range of product features
- ▶ An evolving range of products and strategies designed to help meet your needs today and in the future
- ▶ Partner with you to address your unique investment challenges through our customisation and solutions capabilities
- ▶ Disciplined investment approach focused on delivering optimal tracking, consistent returns and lowering the total cost of ownership
- ▶ Scale, breadth and diversity of our clients and strategies helps us to minimize transaction costs and seek to preserve the value of your investments
- ▶ Design products and strategies that consider the factors that impact your investment results from tax-efficiency to access and liquidity
- ▶ Our investment professionals are focused on delivering performance and efficient outcomes
- ▶ Extensive trading, risk and operational platform positioned to seek efficient tracking as well as enhanced returns
- ▶ Investment track record spanning four decades that has seen investors entrust us with \$4.9 trillion of assets under management as of 31 December 2019

Seeking to deliver high quality, cost-effective access to a broad range of market opportunities

BlackRock's global index investment platform

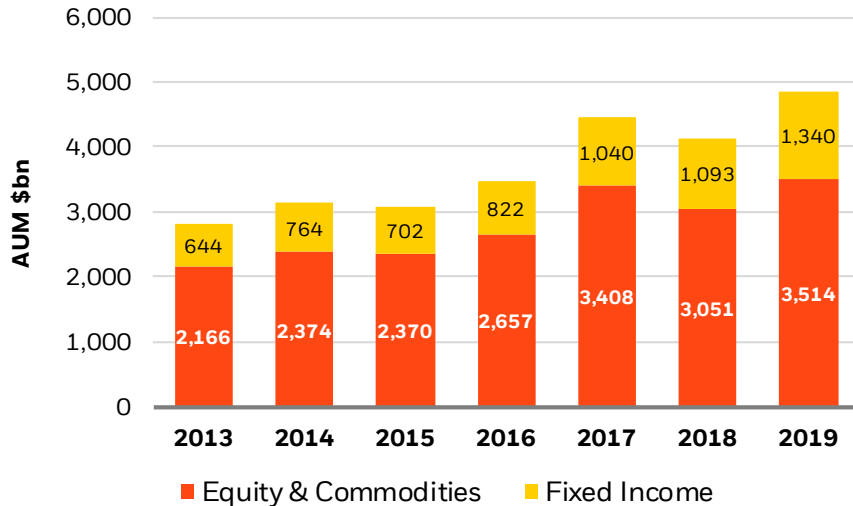
With \$4.9 trillion in indexed assets BlackRock is a global leader in index investing¹

- ▶ Seek to deliver consistent performance with efficient outcomes for our clients
- ▶ Provide clients with access to a broad range of market opportunities

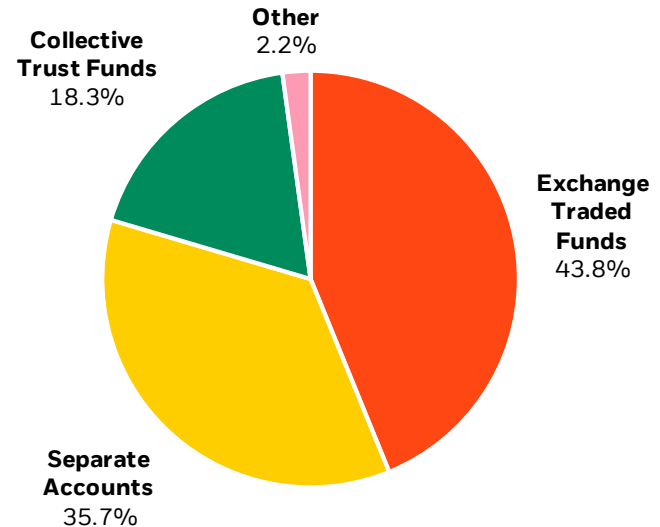
Extensive and flexible platform for index strategies

- ▶ Over 2,500 funds managed against 1000+ benchmarks
- ▶ Investment teams in San Francisco, Atlanta, London, Hong Kong and Tokyo

Total indexed assets of \$4.9 trillion 2019 YTD



Distribution of assets by vehicle type in 2019 YTD



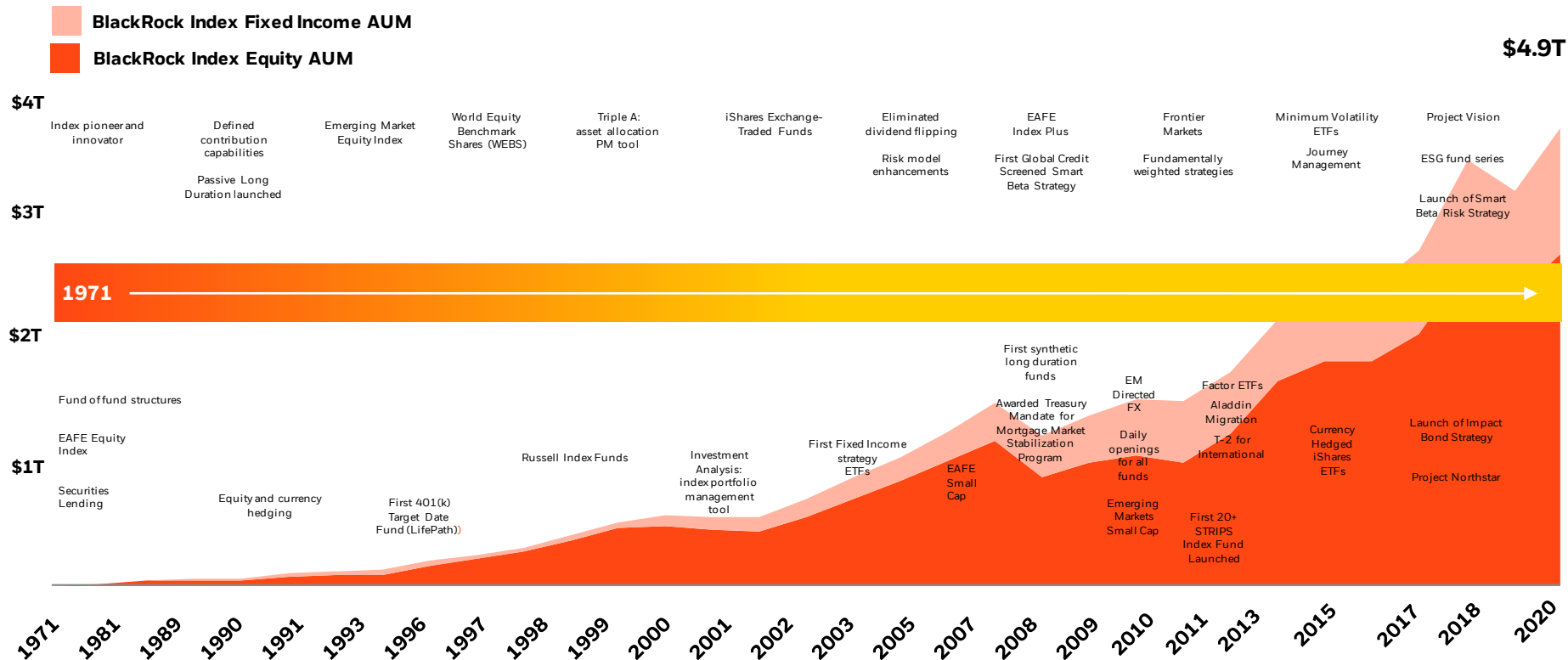
Source: BlackRock as of 31 December 2019
¹ In terms of AUM. Source: Pensions & Investments

49 years of experience driving index forward

Creating solutions so our clients have access to high quality index exposures

- ▶ Drive the industry forward through our ability to create specialized, innovative investments afforded by our scale and depth of expertise
- ▶ Forge new ground for clients – a history of being first to market with new investment ideas
- ▶ Evolve capabilities to continuously deliver on emerging trends – smart beta, global benchmarking, overlay strategies
- ▶ Serve as an index advocate on behalf of asset owners and act a key partner to index providers seeking our practitioner knowledge

49 years of Index Equity – Continual evolution of products, technology and capabilities



AUM as of December 31, 2019

Investments Pillar

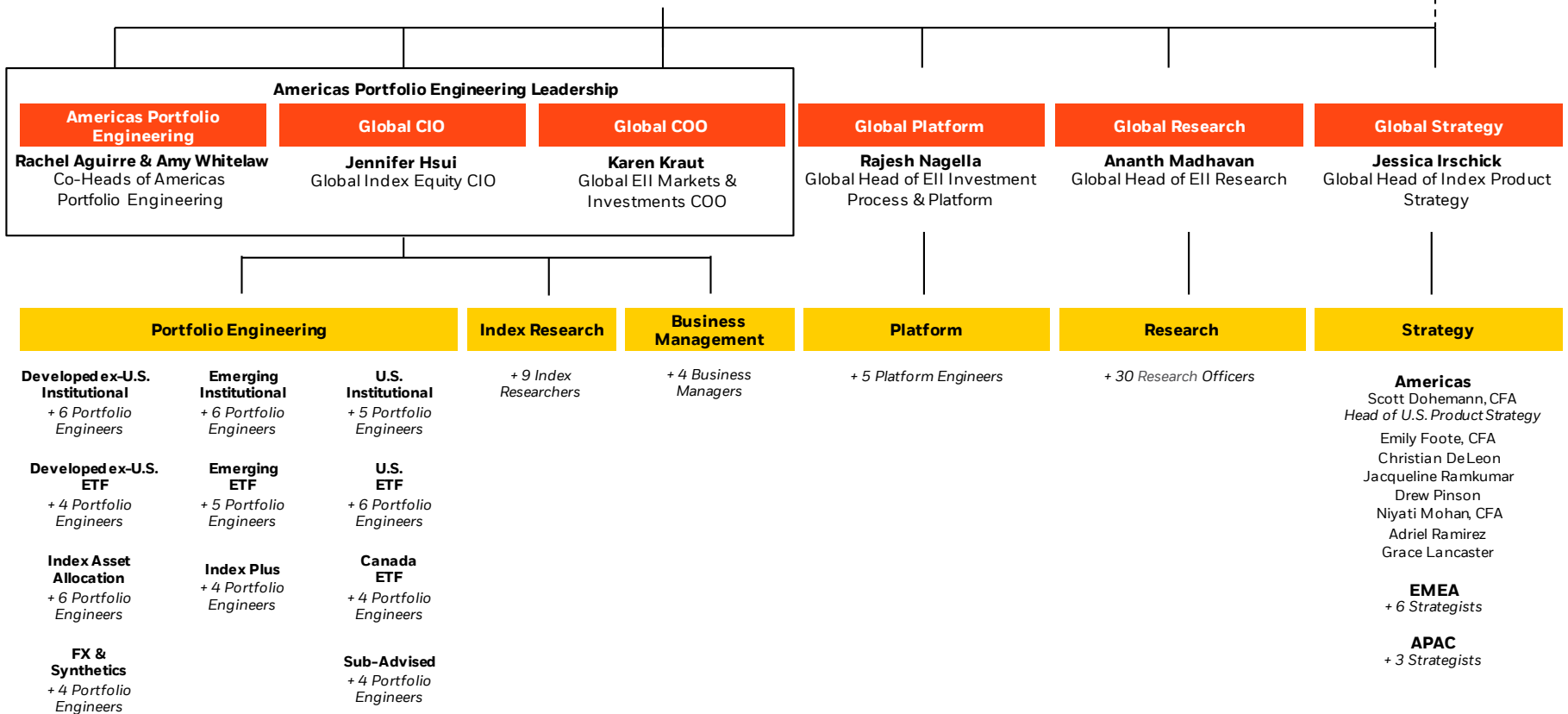
ETF and Index Investments Business

Salim Ramji
Global Head of iShares and Index Investments

Patrick Olson
Chief Product Officer

Investments Pillar

Samara Cohen & Alan Mason
Global Co-Heads of Investments, Products, and Markets



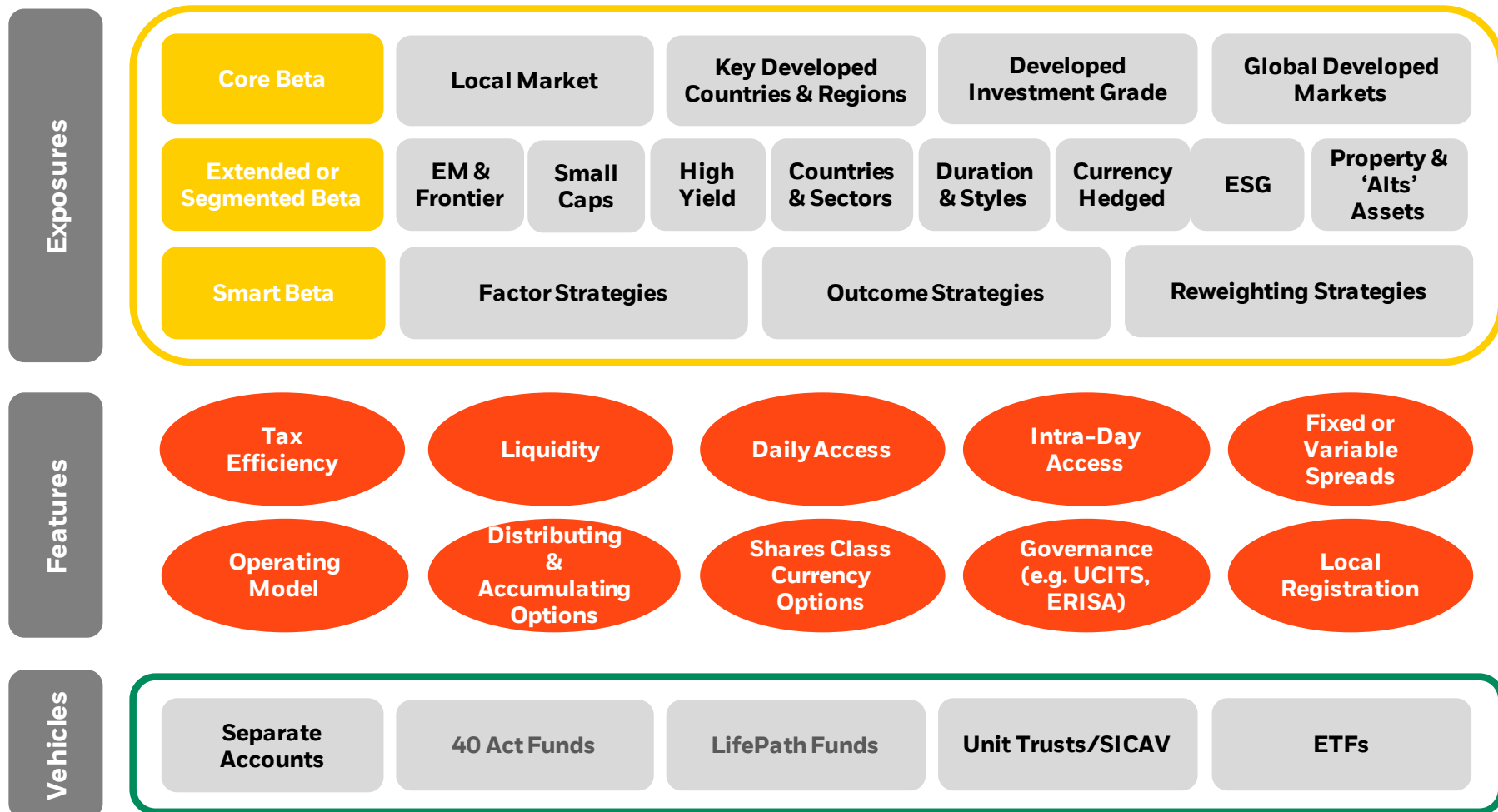
As of 31 December 2019

Americas Fixed Income Index Team

Americas Fixed Income						Research	Strategy
Portfolio Management						Global Research	Americas
Core PM						Research Group	
Scott Radell Head of San Francisco Core PM						Ignacio Blanch Head of Systematic Fixed Income Research	Robert Stanley Head of US Product Strategy
Multi-Sector/Other		Credit		Rates / Mortgages / Emerging Markets		Research	
Scott Radell Head of San Francisco Core PM	Karen Uyehara Sr. Portfolio Manager Multi-Sector	Jonathan Graves Sr. Portfolio Manager Corporate Credit	David Dulski Portfolio Manager Corporate Credit	Jay Mauro Deputy Head of SF Core PM	Mark Buell Portfolio Manager US Government Bonds	+ 8 Index researchers	Matt Tucker Gordon Readey Kathryn Donovan Laura May Chandler Grinnell
Jasmita Mohan Portfolio Manager Multi-Sector	Joseph Maciunas Portfolio Manager Multi-Sector / Rates	Christina Hanlon Portfolio Manger Corporate Credit	Giulia Cerardi Portfolio Manager Corporate Credit	Marcus Tom Portfolio Manager Agency Mortgages	Yang He Portfolio Manager Agency Mortgages		
Joel Silva Sr. Portfolio Manager Munis / Canada / ESG	Jermaine Pierre Portfolio Manager Canada	Cynthia Fan Portfolio Manager Corporate Credit	Jesse Kang Portfolio Manager Corporate Credit	Wes George Portfolio Manager Agency Mortgages	Gabe Shipley Portfolio Manager Emerging Markets		
Rena Patel Portfolio Manager Municipals	Lip Tong Portfolio Manager Canada	Sam Dreyfuss Portfolio Manager Corporate Credit	Allen Kwong Portfolio Manager Corporate Credit	Paige Whistler Portfolio Manager Emerging Markets	Danny Ng Portfolio Manager Emerging Markets		
Kent Yamane Portfolio Manager Securitized Credit	Tao Chen Portfolio Manager Municipals	Cole Bushman Portfolio Manager Corporate Credit					
Clay Armistead Portfolio Manager Securitized Credit							

As of December 31, 2019

An extensive and flexible range of index capabilities



Aligning the exposures you want with the features you need

Considerations in selecting an index vehicle

BlackRock is well positioned to support the State of Connecticut in selecting the optimal vehicle for a given index exposure

The two most relevant vehicles for the State of Connecticut are listed below:

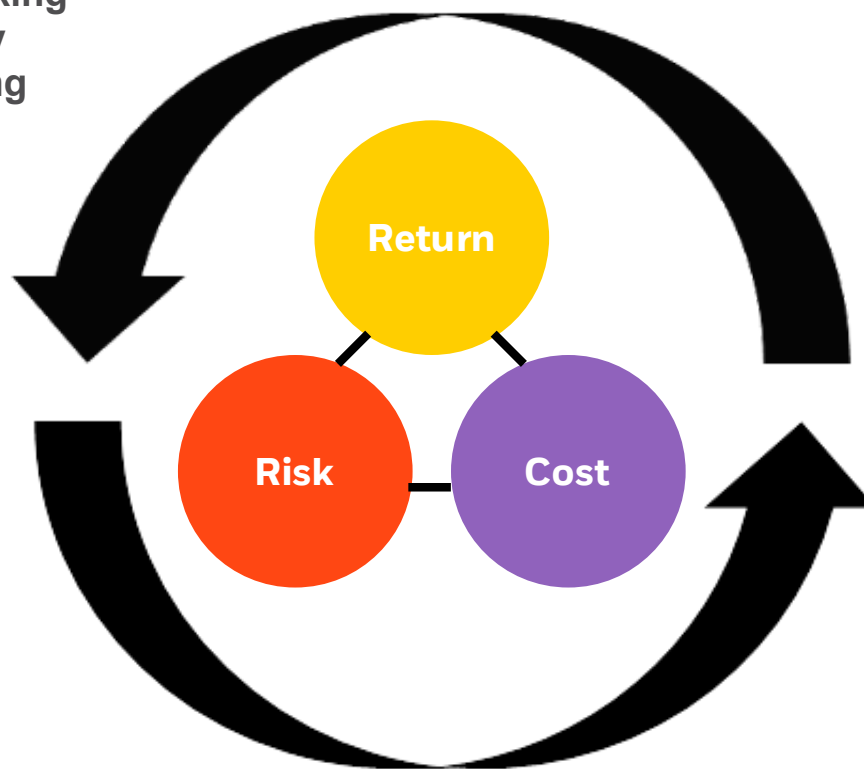
	Separate account	Commingled fund	Comments
Tracking error	Higher	Lower	With a commingled fund's larger pool of assets, greater diversification and more refined risk management is possible, which may result in lower tracking error relative to a separate account.
Holding costs	Higher	Lower	Custody and administrative costs in a commingled fund are shared across a large asset base and many clients. In a separate account, the asset owner is solely responsible for these costs.
Trading costs	Higher	Lower	Unit level crossing opportunities exist within a commingled fund which can significantly reduce costs. Unit level crossing opportunities are not present in a separate account.
Operational burden	Higher	Lower	Separate accounts' complexity and operational requirements can potentially cause more operational burden on investment staff. Staff will be responsible for much of the coordination and administration with the custodian.
Ability to customize	Fully customizable	Not customizable	Separate accounts may be customized to meet the client's desired exposure, restrictions, and trading preferences. Commingled funds are not customizable.
Proxy voting	Client	BlackRock	The client is able to vote proxies in a separate account. BlackRock is designated to vote proxies in a commingled fund.

Proposed vehicles are based on discussion with the State of Connecticut as of November 15th, 2019 and may change pursuant to evolved circumstances.

III. BlackRock Index Investments Philosophy and Process

An approach that seeks to deliver efficient investment outcomes

BlackRock's disciplined, pragmatic and adaptable approach to index tracking is focused on optimally managing and balancing return, risk and cost.



Total Performance Management

Risk Management

- ▶ Risk managed process that seeks to consistently deliver optimal tracking outcomes
- ▶ Market leading risk analytics and investment tools provided by our Aladdin® platform

Consistent Returns

- ▶ Seeks to deliver consistent returns in line with the benchmark
- ▶ Deep knowledge of financial markets and indices
- ▶ Track record of enhanced returns from securities lending

Cost Efficiency

- ▶ Preserve value for clients through our intelligent approach to index events
- ▶ Extensive global trading platform helps ensure cost are low and we have optimal access to liquidity

Index investment management cycle – dedicated expertise and resources

Performance & Oversight

- Review cumulative effect of investment decisions to help identify factors contributing to/subtracting from portfolio performance
- Risk & Quantitative Analysis Team (RQA) monitors dozens of risk factors globally on a continuous basis

Benchmark Knowledge

- Detailed knowledge of index methodologies
- Experience with predicting and projecting index changes
- Focused on optimal treatment of corporate actions
- Continual research into index events



Efficient Trading

- Building smart trading strategies designed to access optimal liquidity
- Industry's largest internal market place for potential netting of client flows
- Focused trading research and systems

Portfolio Construction

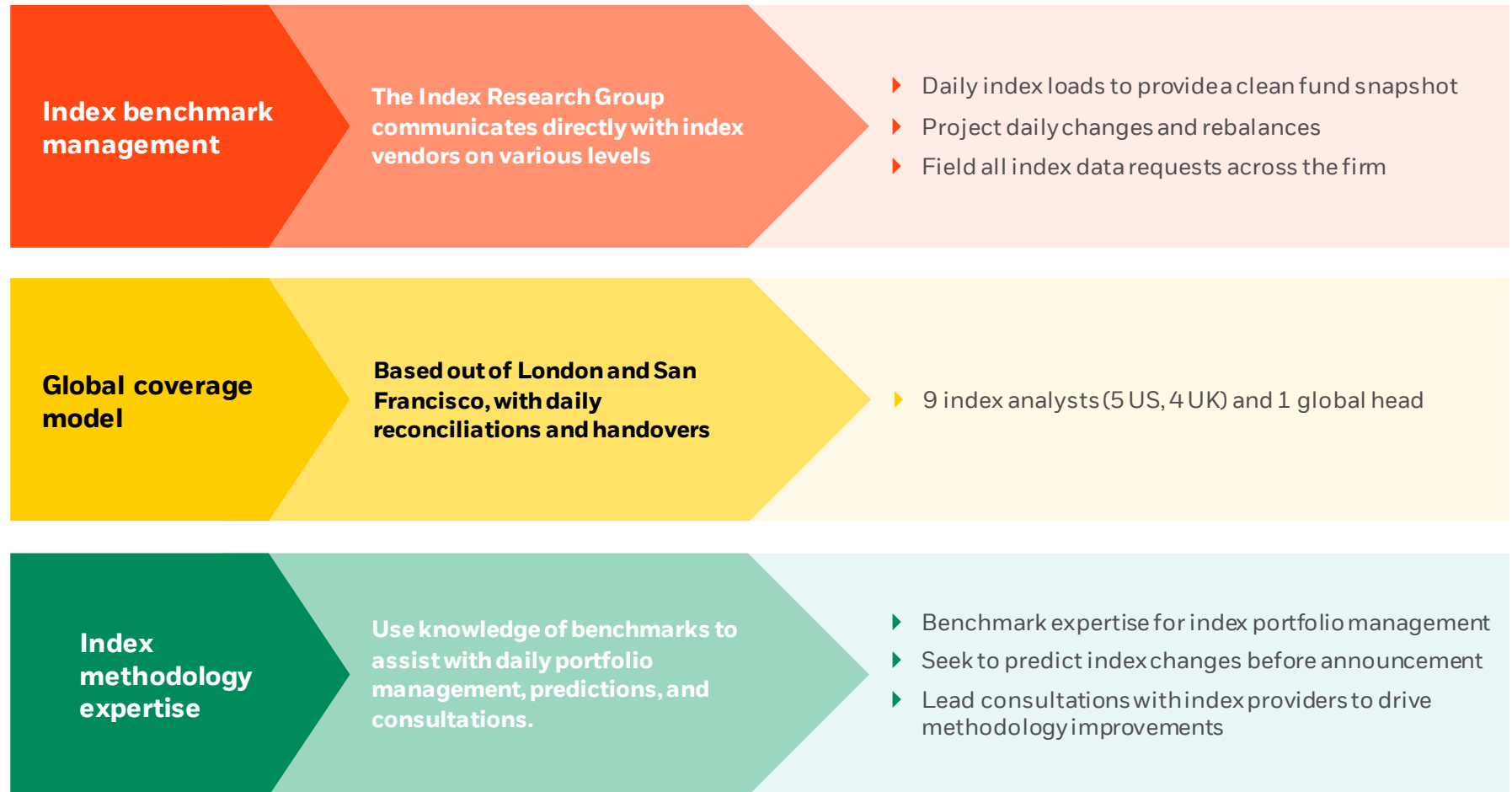
- Significant investment in technology
- Market leading portfolio and risk tools provided by our Aladdin® platform
- Integrated cost and liquidity analysis
- Sophisticated optimization tools

Index investment management cycle

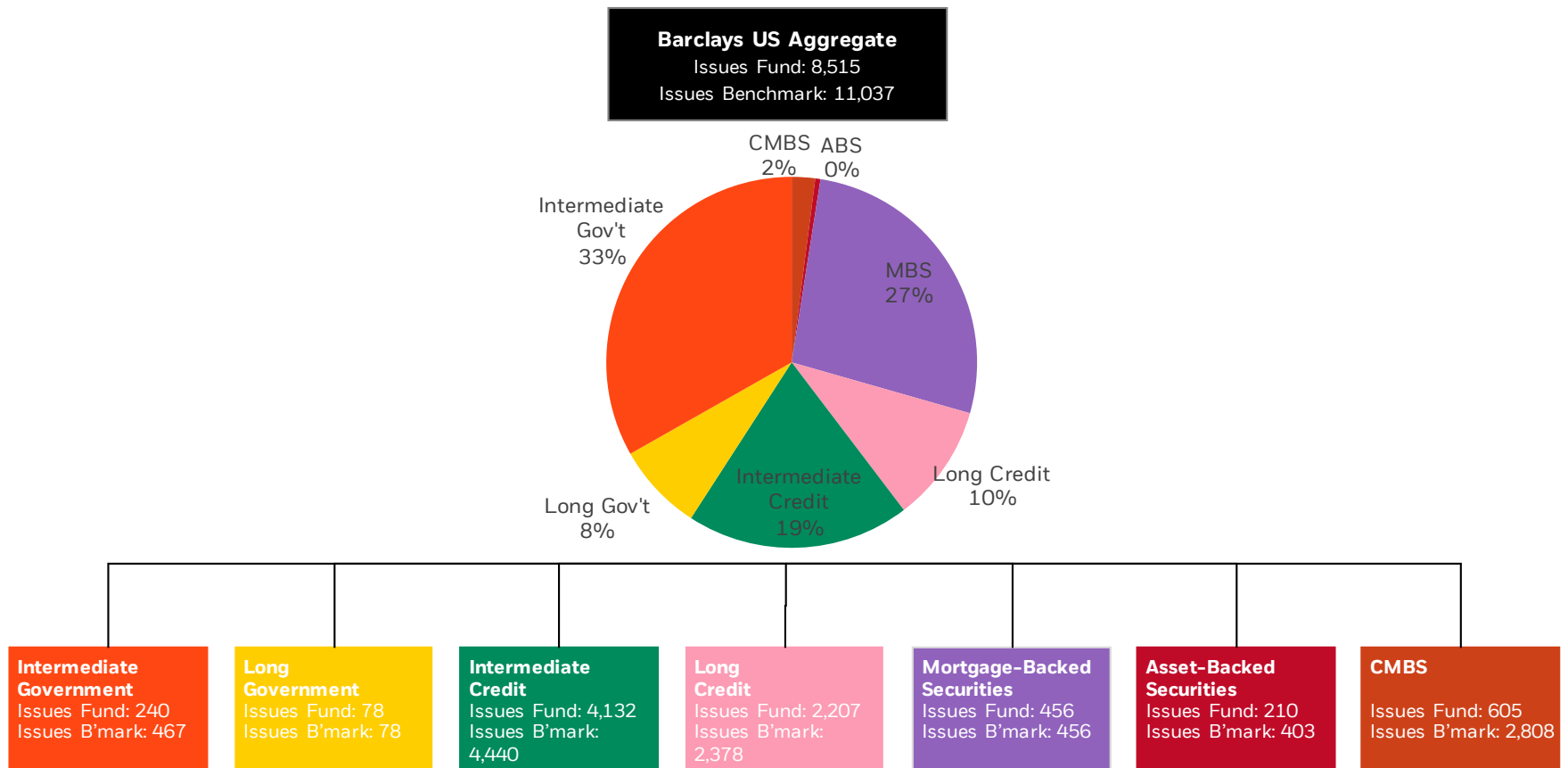
Benchmark knowledge

Benchmark knowledge

EII Strategies has a dedicated Index Research team



BlackRock's modular fund design leverages scale and facilitates crossing opportunities



Source: Barclays as December 31, 2019
 Funds are BlackRock CTFs

Index investment management cycle

Portfolio construction

Portfolio construction

Over 160+ Investment professionals dedicated to overseeing 2,500 Funds managed against 850+ benchmarks. Thousands of investment decisions made every year around:

- Optimizing versus full replication
- Equitizing cash
- Trading around periodic index changes
- Corporate action elections
- Investing / divesting based on client and participant instruction

PortfolioConstruction-IE

09-JUN-2016 - 9:45:51AM As Ordered and Traded w/Proposed - 21 pfs 14502 pos, 54 trd, no ord, no cf 8 distinct benches 5093 pos, no trd, no ord, no cf

Port Groups IE_NA_NR1 <Port Filter> RF Bench Primary Date T MOO CCY USD Filter Security (Imm... S EQ

Round to Disabled Transaction Direction Min. Trade Impact Exp 0.0 USD Sell for Hedging Off

Main Window Adjustments & Projections Stocks Targets Sectors Order View

642 Items

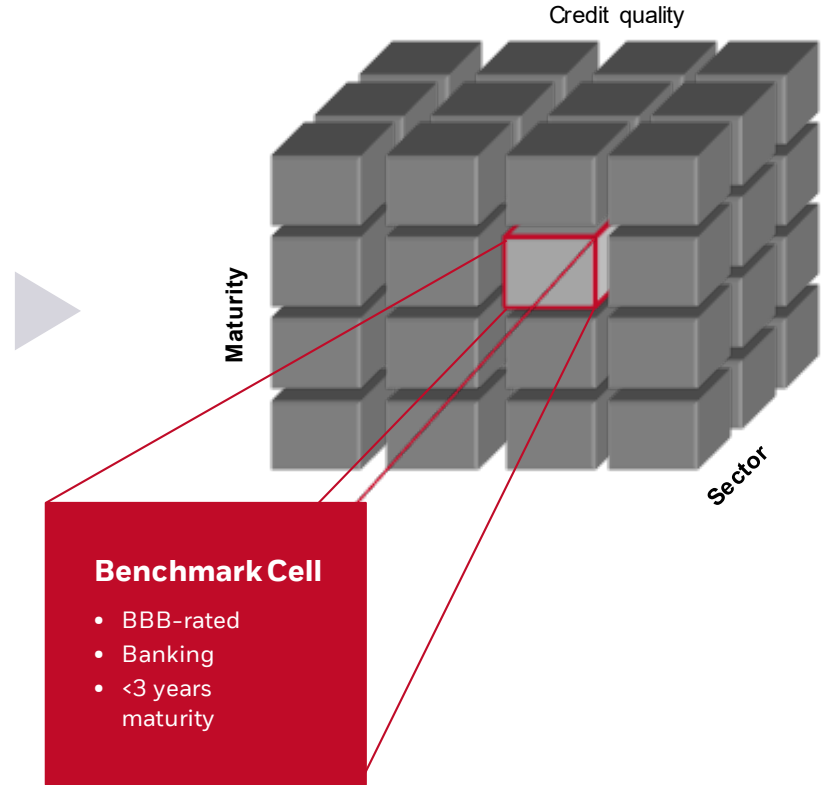
Portfolio	Name	New %Exp Pf (4dps)	%Exp Bench (4dps)	New %Exp Active (4dps)	New Qty Active	Sector Level 1 (Immed) Bench
R.IGROWB	3D SYSTEMS CORP	0.0056%	0.0053%	0.0003%	524	Technology
R.IGROWB	3M CO	1.0249%	1.0252%	-0.0002%	-31	Producer Durables
R.IGROWB	A.O. SMITH CORP.	0.0589%	0.0596%	-0.0007%	-187	Producer Durables
R.IGROWB	AARONS INC.	0.0025%	0.0023%	0.0001%	123	Consumer Discretionary
R.IGROWB	ABBVIE INC	0.9637%	0.9633%	0.0004%	152	Health Care
R.IGROWB	ACADIA HEALTHCARE CO INC	0.0348%	0.0356%	-0.0008%	-279	Health Care
R.IGROWB	ACCENTURE PLC	0.7065%	0.7066%	-0.0001%	-23	Producer Durables
R.IGROWB	ACQUITY BRANDS INC.	0.1067%	0.1062%	0.0005%	41	Materials & Processing
R.IGROWB	ADOBE SYSTEM INC	0.4654%	0.4654%	0.0000%	7	Technology
R.IGROWB	ADVANCE AUTO PARTS INC	0.1061%	0.1059%	0.0002%	34	Consumer Discretionary
R.IGROWB	AECOM	0.0066%	0.0062%	0.0004%	254	Producer Durables
R.IGROWB	AETNA INC	0.0982%	0.0994%	-0.0012%	-217	Health Care

BlackRock's proprietary portfolio management applications, Portfolio Construction and Index Pro, provide a seamless platform, where by every step of the investment process is handled electronically from the time a client order is placed to the time any required trades go out to market.

Screenshot for illustrative purposes only. References to specific companies are included solely to help illustrate the portfolio construction process and should not be construed as a recommendation to buy or sell any securities. Actual BlackRock portfolios may or may not currently hold positions in the securities mentioned.

Stratified sampling: Dividing the various indexes into subsets (cells) based upon relative parameters

Government Bonds	Mortgage-Backed Securities	Credit & Asset-Backed Securities
Sector/Issue type	Issuer (GNMA, FNMA, FHLMC)	Sector/issue type
Maturity	Mortgage type (30 year, 15 year, balloon)	Maturity/average life
Call Features	Coupon	Credit rating
	Age (year of issuance)	Call/payment structure
	Specified Pools "Story"	



Portfolios are constructed by sampling bonds from each index cell

For illustrative purpose only

Portfolio construction

Building a corporate bond index portfolio

Construction process

Part 1

Stratify Universe by Risk Cells

- Sector
- Industry / sub-sector
- Maturity
- Credit
- Structure

Part 2

Optimize by Risk Factors

- Key Rate Duration
- Convexity
- Duration Times Spread
- T-Cost

Example: US Intermediate Investment Grade Corporate Bond Index Fund (illustrative)

Index (*Barclays Intermediate Credit Index*)

Index (4,444 bonds)

BLK (4,132 bonds)

Sector (example: *Industrials*)

Index (2,259 bonds)

BLK (2,133 bonds)

Sub-Sector (example: *Energy*)

Index (338 bonds)

BLK (319 bonds)

Maturity (example: *7-10 years*)

Index (79 bonds)

BLK (74 bonds)

Credit Rating (example: *BBB*)

Index (66 bonds)

BLK (62 bonds)

Structure (example: *Make Whole Call*)

Index (3 bonds)

BLK (1 bonds)

Source: BlackRock; data as of 31 December 2019. Example for illustrative purposes only. And does not depict actual Collective Trust Fund data. It is shown to demonstrate the investment process.

Execution: Seek to reduce costs by leveraging pricing power on a single, global platform



What we do

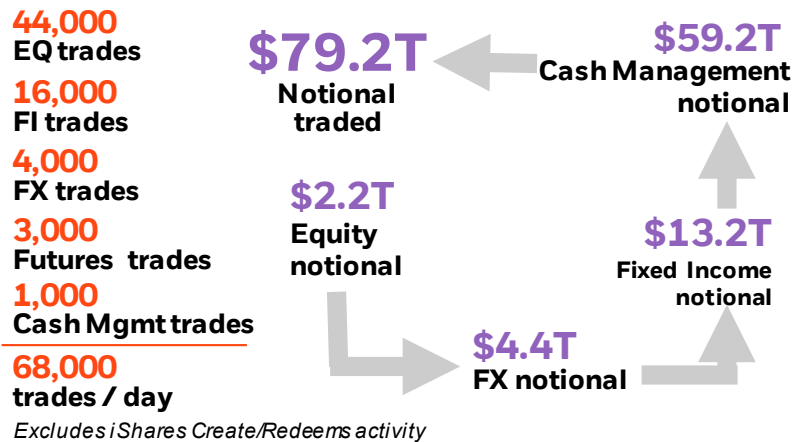
- Buy and sell securities to implement investment ideas in the market
- Utilize a variety of trading venues, sophisticated trading tools and counterparty relationships to get access to more liquidity
- Where able, internally match buys and sells of the same security to eliminate transaction cost

The advantage of scale

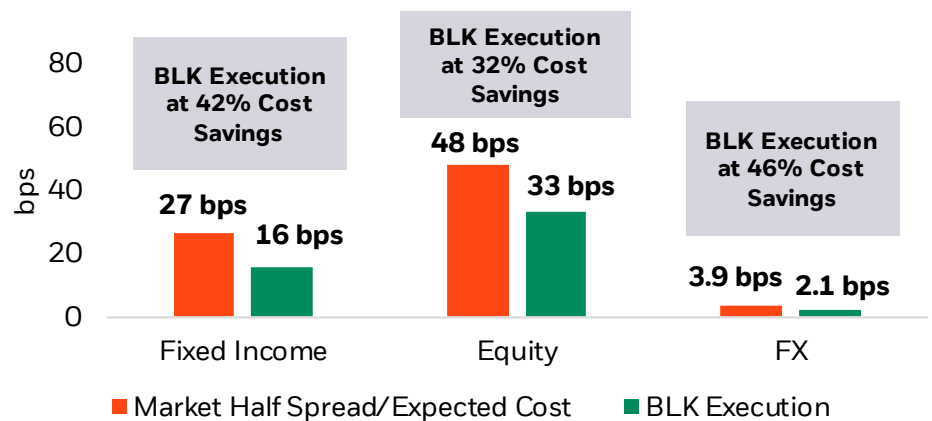
- Tier 1 client to all major counterparties which uniquely positions us to access liquidity
- 24-hour global agency trading platform to enable trading at times of maximum liquidity and to leverage local market knowledge and sector expertise
- Trader expertise across all major asset classes and ~\$79.2T USD of annual volume¹
- Large volumes and breadth of clients provides potential opportunities for crossing securities, reducing transactions costs

Result: Execution benefits can be passed directly on to clients as cost savings

BlackRock's Execution Activity¹



Execution Costs: BlackRock versus the Market²



¹ Projected annualized activity as of 6/30/2019; Figures show in USD; Source: BlackRock. Inclusive of internal crossing opportunities. Numbers may not add up to total due to rounding. ² BlackRock analysis of all Fixed Income High Yield and Investment Grade Credit, FX, and Equity trades excluding derivatives for YTD 2019 as of 6/30/2019. BlackRock Execution Cost is the average difference between: the actual price achieved on the trade and the benchmark price. For Equity and FX, benchmark price is the market price, based on exchange data at the time when the PM submitted the order. For Fixed Income, benchmark price is the previous day's closing price. The Market Half Spread (or Expected Cost) is an estimate of the average execution cost of a market participant. For Fixed Income, Market Half Spread is estimated quarterly for each sector and maturity bucket based on a consensus opinion of BlackRock traders as well as a set of over 10 broker dealers. For FX, brokers provide Market Half Spread quarterly on a consensus basis for each currency pair and size range. For Equity, BlackRock calculates Market Expected Cost using an average of multiple independent broker models. There is no guarantee that a positive investment outcome will be achieved. Subject to Change.

Index investment management cycle

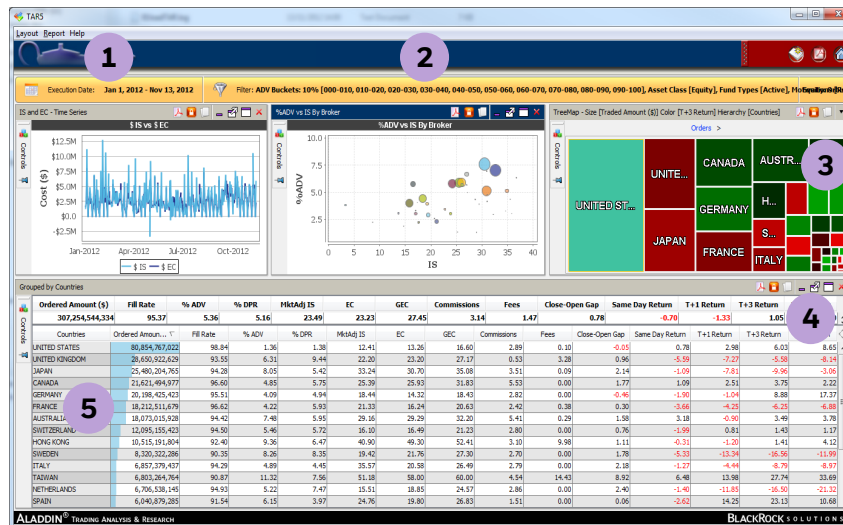
Transaction Costs

Efficient trading

Proprietary applications are used to monitor expected trading costs and actual trading costs

1. Ability to specify date range
2. Custom filters to drill into specific trading activity
3. Data visualization provides intuitive execution insights
4. Extensive library of metrics and analytics for evaluating trading performance
5. Enable breakdown of TCA across order, execution, broker, or asset-level characteristics and dimensions

BlackRock's proprietary applications



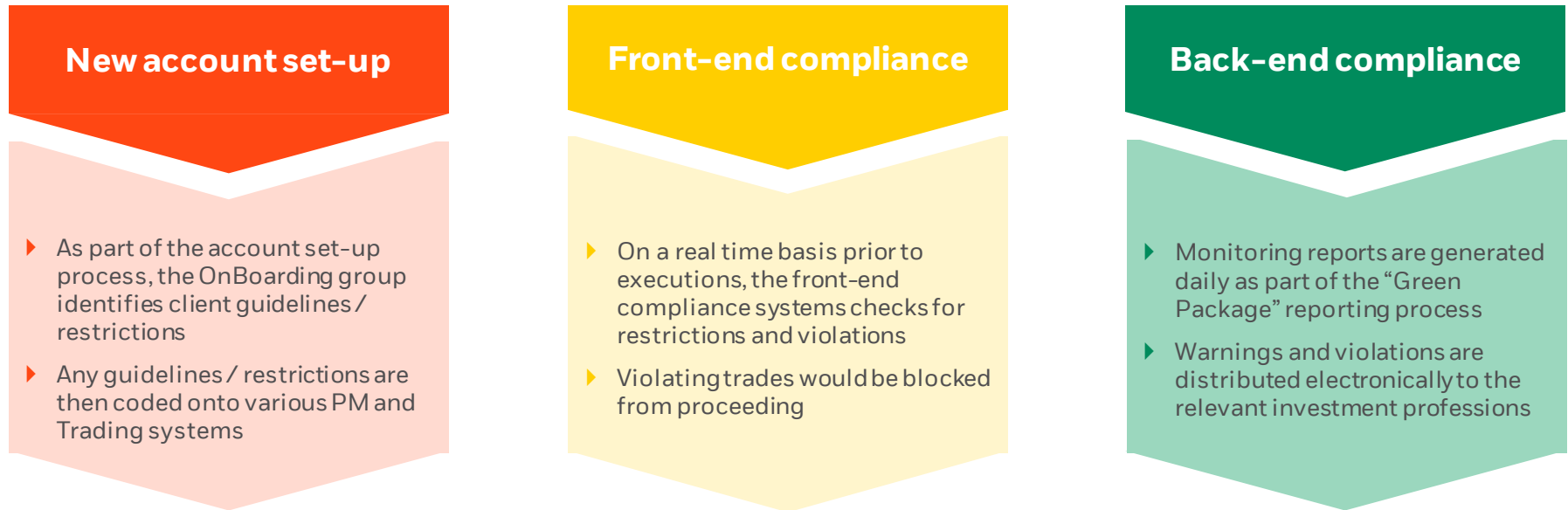
Index investment management cycle

Performance & oversight

Performance and oversight of portfolios occurs through the following steps

- Daily Portfolio Management review
- Monthly IRC review with senior management
- Independent review from BlackRock's Risk and Quantitative Analysis Group

The following additional systematic checks occur for all portfolios and accounts



Clients Seeking Alternatives to Traditional Index Returns

Factor-based strategies and other systematic solutions offer alternatives to traditional index returns

U.S. Aggregate Strategies

Defensive Credit



- ▶ Defensive, systematic strategy designed to avoid issuers that are at risk of experiencing credit deterioration

MBS Up In Coupon



- ▶ Factor-based strategy designed to outperform traditional MBS indices by capturing attractive risk-adjusted carry

Curve Steepener



- ▶ Factor-based strategy designed to outperform traditional government indices by capturing term-premia and roll down

Short Carry



- ▶ Systematic strategy designed to generate carry through use of US Treasury Futures and short-dated securitized holdings

Broader Strategy Options

Balanced Risk “FIBR”



- ▶ Factor-based strategy designed to balance interest rate and spread risk to improve risk adjusted returns

Systematic CorePlus



- ▶ Systematic strategy designed to outperform traditional indices by tilting into sectors traditionally utilized by active managers

Capital Efficiency



- ▶ Systematic strategy designed to release capital through synthetic replication of traditional fixed income indices

Impact Investing



- ▶ Systematic strategy designed to incorporate ESG factors while minimizing tracking error to traditional indices

Clients Seeking Alternatives to Traditional Equity Index Returns

Investors today are enhancing their passive allocations in three strategies:

Return Enhancement Strategies

Index Plus



Enhanced index strategy designed to actively seek alpha, by tactically employing event driven trading that focus on IPOs, index changes, and other corporate events that might cause price dislocation

Factors



Factor-based strategy designed to provide incremental returns over capitalization weighted indices through broad, persistent sources of return

Securities Lending



Return enhancement strategy designed to capture scarcity premium by lending securities

Risk Reduction Strategies

Minimum Volatility



Factor-based strategy designed to reflect the characteristics of a minimum variance strategy focused on returns as well as the lowest absolute risk

Currency Hedged



Risk reduction strategy designed to minimize or eliminate foreign exchange risk

Alternative Index Strategies

Commodities



Market cap weighted strategy designed to give exposure to commodities through the use of commodity futures

Environmental, Social, and Governance



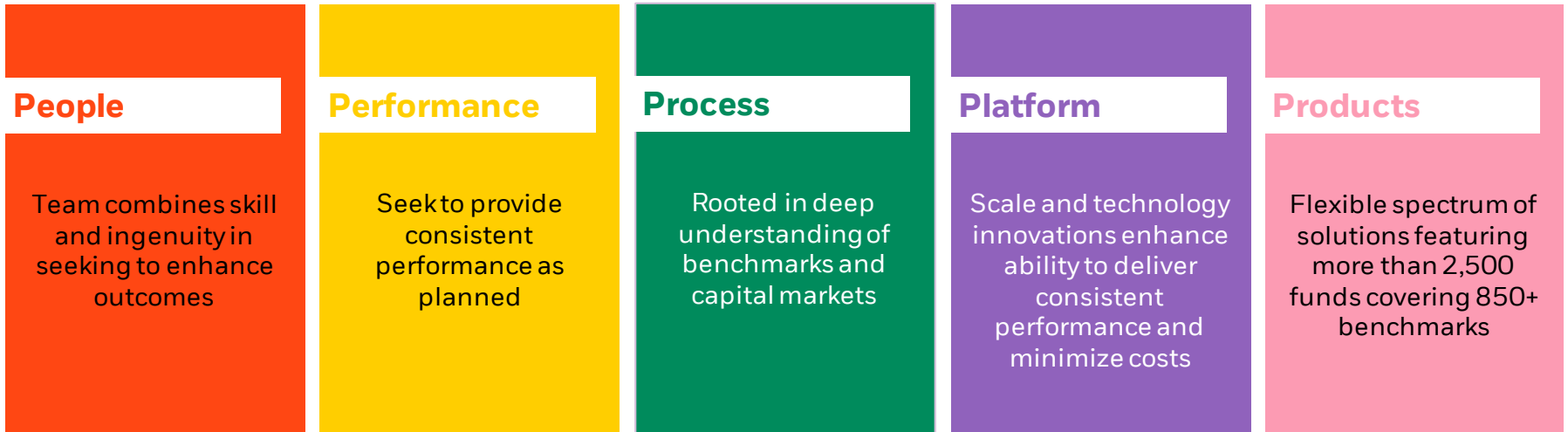
Market cap weighted strategy designed to incorporate ESG factors while minimizing tracking error to traditional indices

Key takeaway

Our approach to Index: anything but passive

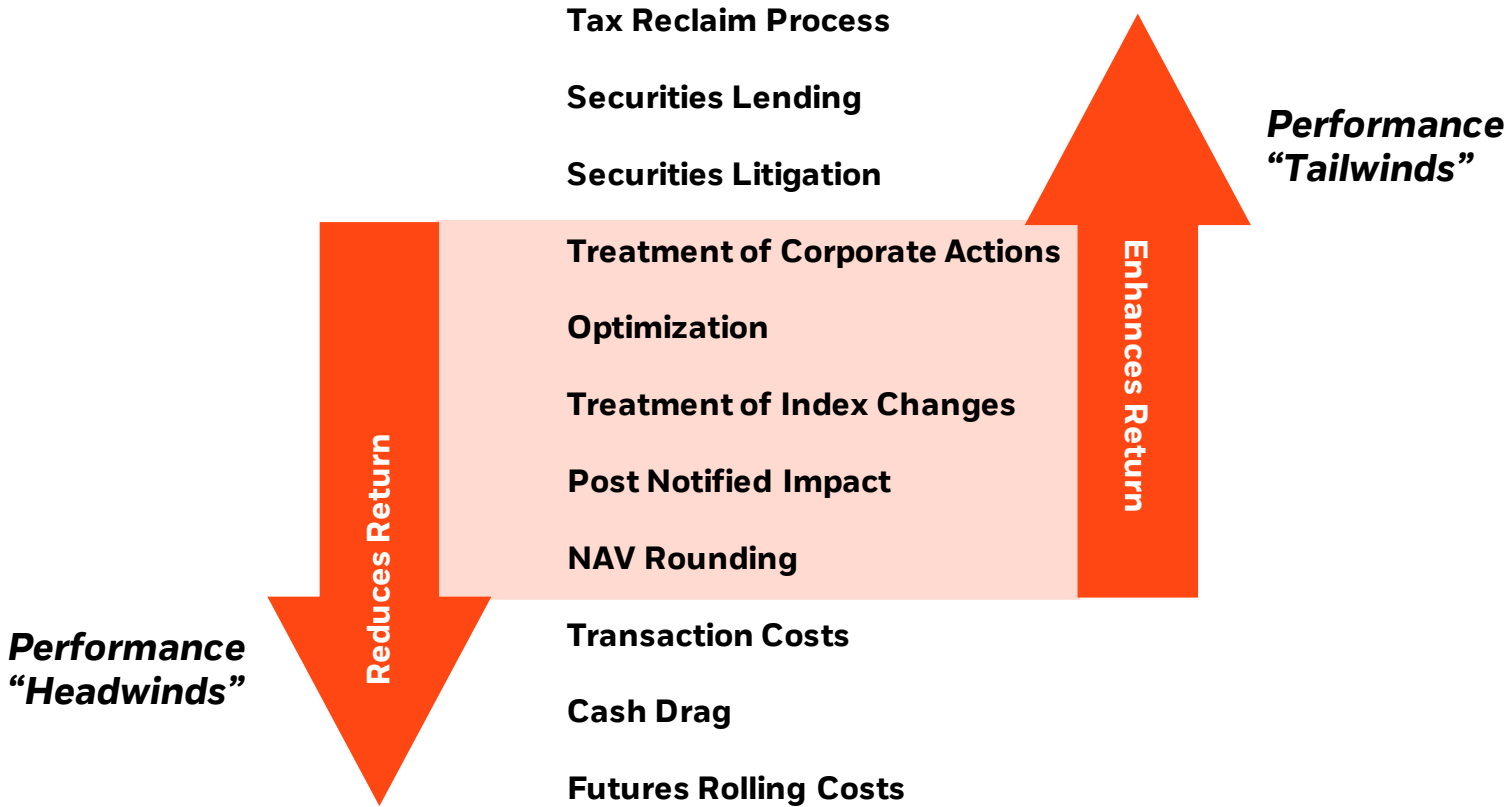
Investors today demand more efficient returns and innovative ways to use index products

BlackRock's Index approach is focused on:



IV. Performance Attribution

Major sources of tracking error: Global & domestic index funds



V. Equity Index Events

November 2019 MSCI Quarterly Index Rebalance Results

- ▶ **November's MSCI Quarterly Rebalance had relatively high turnover due to the continuing changes to the Emerging Markets universe**
- ▶ **The overall trade resulted in a gain of \$14.2 million**
- ▶ **696 MSCI funds were traded globally representing total AUM of approximately \$1.4 trillion**
- ▶ **118,882 orders were executed worth approximately \$80.5 billion**
- ▶ **99% of trades were executed on effective date across all regions. Some orders were placed prior to effective date for liquidity management**

Rebalance highlights

China A – third and final tranche of weight increases and the addition of mid-cap:

- ▶ Inclusion factor increased from 15% to 20% impacting 268 securities.
- ▶ 204 new China A-share additions at the 20% inclusion factor. Most of these were newly included mid-cap names.
- ▶ Overall China A trade closed slightly up 0.3% on trade date. Compared to previous reviews, there was significantly increased volume traded at the close.

US – the Smart Beta indexes experienced high two-way turnover this rebalance:

- ▶ USA Momentum: 104%
- ▶ MSCI USA Quality: 26%
- ▶ MSCI USA Minimum Volatility: 20%

For USA Momentum the turnover was particularly high due to the fixed number of securities index methodology and increased recent market volatility.

MSCI index change details

Index	# Adds	# Deletes	Nov 2018 One-Way Turnover	Nov 2019 One-Way Turnover
EAFE	12	17	0.4%	0.5%
EAFE SC	82	53	2.9%	2.9%
Emerging Standard	243	34	1.2%	3.8%
Emerging SC	126	91	7.07%	7.0%
World	35	35	0.6%	0.7%

Source: BlackRock and MSCI as of November 2019. Past performance is not indicative of future results.

December 2019 S&P Dow Jones / FTSE Russell Index Rebalance Results

- ▶ There were six major index rebalances in December – S&P Dow Jones, FTSE Russell, NASDAQ, STOXX, DAX and SWISS
- ▶ 611 funds were traded globally representing total AUM of approximately \$2.5 trillion
- ▶ Globally, EII executed 91,230 orders worth \$83.9 billion
- ▶ 54% of the trade worth \$45.3 billion was crossed – this was largely due to the annual growth/value reweighting
- ▶ 99% of trades were executed on effective date across all regions

Rebalance highlights

Developed Markets:

- ▶ **US** – Spreads for the S&P 500, 400 and 600 rebalance trades closed up 0.62%, down -1.92% and up 4.06% respectively. Live Nation Entertainment (addition), Steris Plc (addition) and Affiliated Managers Group (deletion) were the highest contributors to positive spread in the S&P 500.
- ▶ **EMEA** - The DM Europe buy-sell spread was up 0.70% on trade date, mainly driven by Adyen (a share and float increase at this rebalance).
- ▶ **APAC** - The DM APAC trade went right way driven by right way performance in Australia and Japan.

Emerging Markets:

- ▶ **Middle East** – There were two additions to this region at this rebalance - Saudi Aramco and Arabian Centers. The trade went wrong way driven by underperformance by Aramco.
- ▶ **APAC** – Effective day trading closed flat for this region.

S&P Dow Jones / FTSE Russell index change details

Index	# Adds	# Deletes	December 2018 Two-Way Turnover	December 2019 Two-Way Turnover
S&P 500	3	3	1.2%	0.8%
S&P 400	10	10	0.72%	2.4%
S&P 600	9	9	0.70%	1.1%
S&P/TSX Composite	5	2	1.0%	1.0%
S&P Dow Jones Completion	40	7	1.2%	2.2%
FTSE All World	16	34	1.0%	0.9%

Source: BlackRock, S&P Dow Jones, and FTSE Russell as of December 2019. Past performance is not indicative of future results.

Russell Reconstitution 2019

Overall the EII Team executed 178,880 orders worth approximately \$67 billion

- ▶ Overall performance of the reconstitution in 2019 was slightly negative
- ▶ Crossed approximately 48% of activity
- ▶ Turnover across passive managers was approximately \$173 billion

Methodology Changes

- ▶ This year had very limited methodology changes
- ▶ The most impactful change was one to Russell's criteria for country of domicile
 - Under the new methodology, where both country and regional information are published, the regional reporting will be considered inconclusive and assets/revenue for a country must be an absolute 20% greater than a single region to be considered conclusive
 - Under the new methodology, NXP Semiconductors and Garrett Motion were no longer considered eligible to remain constituents of the Russell 1000

Buy – sell spread performance

Russell 1000

- ▶ **Adds** - Were up 1.39%, outperforming the Russell 1000 by 0.77%. This was mainly driven by Spotify (SPOT) and Uber Technologies (UBER).
- ▶ **Deletes** - Were down 1.61%, underperforming the index by 2.23%. The biggest underperformer was NXP Semiconductors (NXPI).
- ▶ Overall trade moved wrong-way

Russell 2000

- ▶ **Adds** - Closed up 2.72%, outperforming the Russell 2000 by 1.43%. The highest contributors were Stitch Fix (SFIX), UroGen Pharma (URGN) and Verra Mobility (VRRM).
- ▶ **Deletes** - Ended up 1.31% for the day, performing in line with the index. Financials and Industrials outperformed while Energy and Real Estate underperformed.
- ▶ Overall moved right way

Index change highlights

	Russell 1000	Russell 2000
Adds	47	189
Deletes	21	157
2018 Two-Way Turnover	3.00%	22.10%
2019 Two-Way Turnover	2.89%	18.16%

Source: BlackRock, as of June 2019. Past performance is not indicative of future results. It is not possible to invest directly in an index. 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.

MSCI market classification summary

In 2019, MSCI continued to implement several country reclassifications to their Emerging markets universe. 2019 also brought changes to China A Shares.



Saudi Arabia

Saudi Arabia was officially added to the 2018 Annual Market Classification Review in 2017. The country was implemented in a **two-step inclusion process**, which commenced in May 2019 and continued through to August 2019. Saudi Arabia made up **2.6% of the MSCI Emerging Markets** upon completion.

MSCI increased the weight of **China A shares** in the MSCI Indexes by increasing the inclusion factor (IF) from 5% to 20% in **three steps**. The process began in May 2019 and ended in November 2019. MSCI increased the inclusion factor of all China A Large Cap shares in the MSCI Indexes:

China A-shares

1. from 5% to 10% and added ChiNext Large Cap shares with a 10% inclusion factor coinciding with the May 2019 Semi-Annual Index Review (SAIR).
2. from 10% to 15% coinciding with the August 2019 Quarterly Index Review
3. from 15% to 20% and added China A Mid Cap shares, including eligible ChiNext shares, with a 20% inclusion factor to the MSCI Indexes coinciding with the Nov 2019 SAIR.

On completion of this three-step implementation, there were 244 Large and 228 Mid Cap China A shares, including 27 ChiNext shares, in the **MSCI Emerging Markets Index, representing a weight of 3.9%** in the index.

Kuwait

MSCI will reclassify **Kuwait** to Emerging Markets status, subject to availability of omnibus account structures and same National Investor Number (NIN) cross trades for international investors. This will occur in one step coinciding with the May 2020 Semi-Annual Index Review. This will lead to an inclusion of nine stocks in the MSCI Emerging Market Index having a pro forma index weight of approximately **0.5% of the MSCI Emerging Markets**.

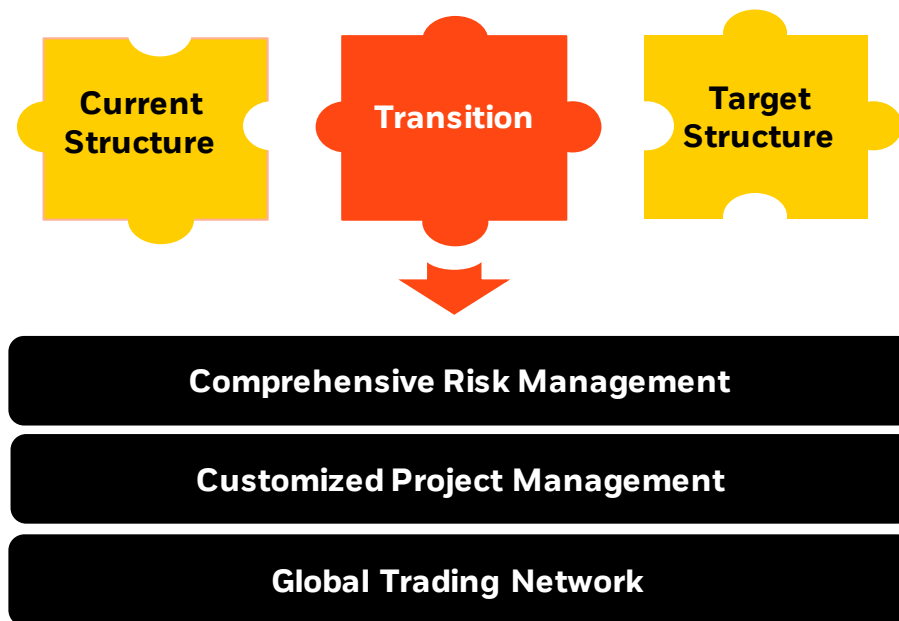
Source: MSCI as of 12/31/2019

VI. Transition Management Capabilities

Our operating model

BlackRock Transition Management Model

- Full Fiduciary oversight with full transparency and no sell side conflicts
- Dedicated team of specialists focused exclusively on transitions
- Leverage BlackRock's risk analytics, portfolio management, and trading capabilities
- Based within the fiduciary environment of the worlds largest asset manager



Key Capabilities

- Industry leading Aladdin risk management platform
- Transparent implementation reporting
- Agency-only multi-counterparty execution
- Scientific approach to trading

Experienced partner

- 60 specialists globally*
- Integrated transition management systems
- Local presence in San Francisco, New York, London and Hong Kong
- \$402 billion of transition flow in 2019**
- 290 transition events in 2019**

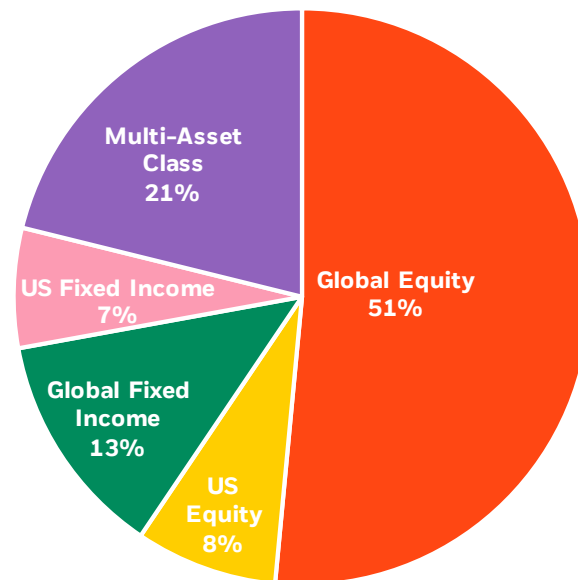
*as of Q4 2019

**Full year 2019 round trip value

An Experienced Partner with Long Term Commitment to Core Business

- Core value added service since 1993
- Significant economies of scale transferred to our clients
- Global implementation services across all asset classes
- Fiduciary alignment of interests from the onset to execution

2019 Volume by Asset Class



Global 2019 Transition Volumes		
Asset Class	Transition RTV (in \$bil)*	Number of Events
Global Equity	207	146
US Equity	32	42
Global Fixed Income	51	39
US Fixed Income	27	19
Multi-Asset Class	85	44
Total Volume	402	290

Source: BlackRock *Refers to round trip value of assets transitioned

Organizational Structure

Paul Whitehead
 Managing Director
 Global Head of Equity Trading &
 Global Head of TM

Americas

Paul Francis
 Managing Director
 Head of Americas TM

Rajeev Ghia+
 Managing Director
 Head of Americas
 Client Strategy

Will Jackson Director
Jon Platt Director
Jim Amorella Director
Laura Peres Director
Anthony Bassili Director
Adam Esposito Director

Lorenzo Santinelli Vice President
Asher Vandevort Associate
Jennifer Kung Vice President

Karen Lindell Associate
Kyle Christopherson Associate
Chirag Lal Vice President

James Curtin Associate
Claire Hill Associate
Leo Kurtysh Director
Kenneth Wong Vice President

John Planek Associate
Aleesha Mundra Analyst
John Planek Associate
Caroline Maran Associate

Mathew Waters Vice President
 Head of Global Business & Platform Mgmt.
Angela Saporito Vice President
 Business Mgmt.

EMEA

Nick Hogwood
 Managing Director
 Head of International TM

Andy Gilbert++
 Managing Director
 Head of EMEA
 Client Strategy

Ian Maguire Director
Femida Khankhara Director
Raymond Pestana Director
Steve Wagstaff Director

Adam Lubczanski Vice President
Katie Haynes Vice President
Balazs Bogdan Vice President
Dickie Cheung Vice President

Mikko Lindgren Vice President
Jonathan Deans Vice President
Matyas Ujvary Associate
Christie Gray Associate
Sejla Aman Analyst
Tamas Bence Associate

Dominic Henry Associate
Daniel Colbourne Vice President
Isobel Murray Associate
Aygul Nazarova Associate
Ksenia Parviainen Analyst
Calder Manser Associate
Dora Tarcali Associate

APAC

Stuart MacDonald++
 Director
 Head of Asia TM

Junya Umeno+++
 Director
 Japan Client Strategist

Raymond Zhao Vice President
Stuart Anderson Director

Shawn Hong Vice President
Tahmimm Hassan Vice President

Yuki Tanaka Vice President
Sachiko Takahashi Vice President

+ R. Ghia direct line to P. Francis (Regional head)
 ++ A. Gilbert and S. MacDonald direct line to N. Hogwood (Regional Head)
 +++ J. Umeno direct line to H. Arita (President of BlackRock Japan)

• Source: BlackRock as of January 2020

VII. Appendix

Fee Proposal & Performance Composites

Strategic Partnership Fee Proposal

The below represents an initial proposal which is subject to change based on further discussions with the State on selected mandates and overall sizing.

Strategy	Commingled Fund Fees			Separate Account Fees			
	First \$100mm	Next \$400mm	Balance	First \$100mm	Next \$400mm	Balance	Minimum Revenue
S&P 500 ¹	1.25	1.00	0.75	2.75	2.00	1.25	\$125k
MSCI EAFE IMI ²	4.00	3.50	3.00	6.00	5.00	4.00	\$175k
MSCI ACWI ³	3.50	3.00	2.50	5.50	4.50	3.50	\$200k
US Debt ⁴	3.25	2.60	1.30	4.55	3.90	2.60	\$200k
US TIPS ⁵	3.00	1.50	0.75	4.50	3.00	1.50	\$150k
US High Yield ⁶	12.00	10.50	9.00	13.50	12.00	10.50	\$225k
EMD Hard Currency ⁷	12.00	10.50	9.00	13.50	12.00	10.50	\$225k
EMD Local ⁸	16.50	15.00	13.50	18.00	16.50	15.00	\$400k

¹Strategy managed to the S&P 500 Index

²Strategy managed to the MSCI EAFE IMI Index

³Strategy managed to the MSCI ACWI Index

⁴Strategy managed to the Bloomberg Barclays US Aggregate Index

⁵Strategy managed to the Bloomberg Barclays US TIPS Index

⁶Strategy managed to the ICE Bank of America Merrill Lynch US High Yield Index

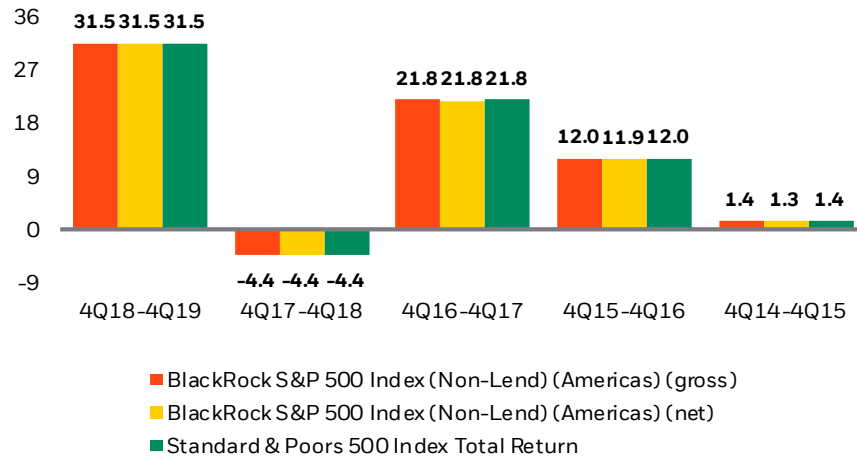
⁷Strategy managed to the JP Morgan EMBI Global Diversified Index

⁸Strategy managed to the JP Morgan GBI-EM Global Diversified Index

Proposed fees are subject to final negotiations.

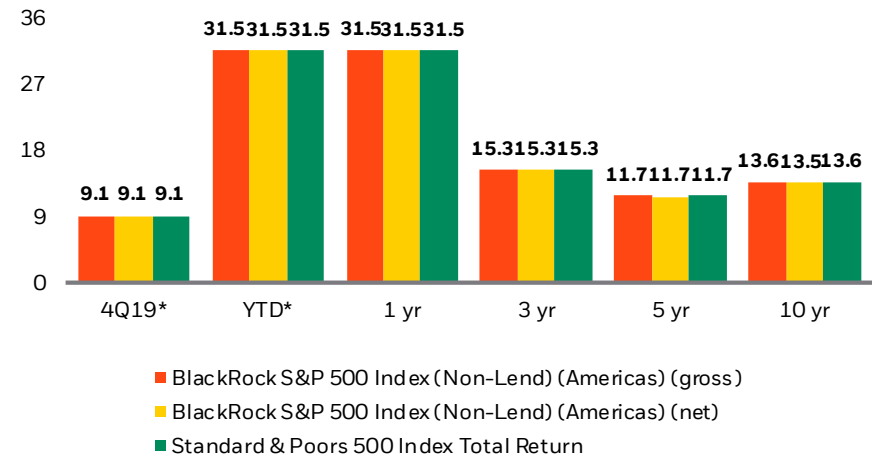
BlackRock S&P 500 Index (Non-Lend) (Americas) Composite Performance

12-month total return in USD (%)



Composite	1 yr	3 yr	5 yr	10 yr
Tracking error	0.02%	0.01%	0.01%	0.01%
Info ratio	2.00	0.79	0.74	0.55
Sharpe ratio	2.37	1.14	0.89	1.05

Total return in USD (annualized %)



Composite	1 yr	3 yr	5 yr	10 yr
Gross performance	31.52%	15.28%	11.70%	13.57%
Net performance	31.48%	15.25%	11.66%	13.51%
Benchmark performance	31.49%	15.27%	11.70%	13.56%
Active return (gross)	0.03%	0.01%	0.00%	0.01%
Active return (net)	-0.01%	-0.02%	-0.04%	-0.05%

The figures shown relate to past performance. Past Performance is not a reliable indicator of current or future results and should not be the sole factor of consideration when selecting a product or strategy.

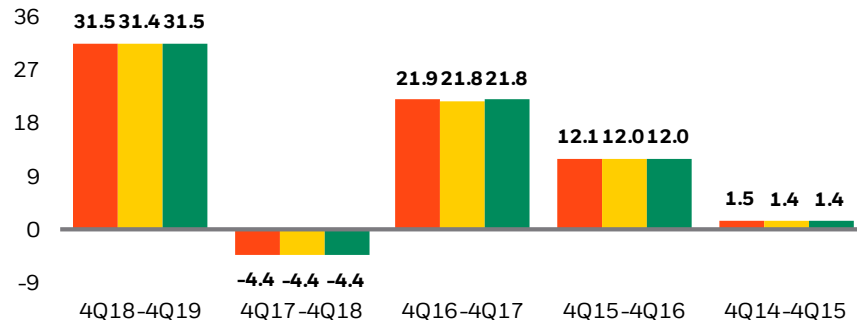
* Unannualized

Certain performance results do not reflect the deduction of management/advisory fees and other expenses; management/ advisory fees and other expenses will reduce a client's return. For example, assuming an annual gross return of 8% and an annual management/ advisory fee of 1.00%, the net annualized total return of the portfolio would be 6.94% over a 5-year period. Fees are described in Part 2 of BlackRock's Form ADV. Indexes are unmanaged. It is not possible to invest directly in an index.

† See page titled "Historical data BlackRock S&P 500 Index (Non-Lend) (Americas) Composite Performance" for GIPS compliant data related to this composite.

BlackRock S&P 500 Index Separate Account (Americas) Composite Performance

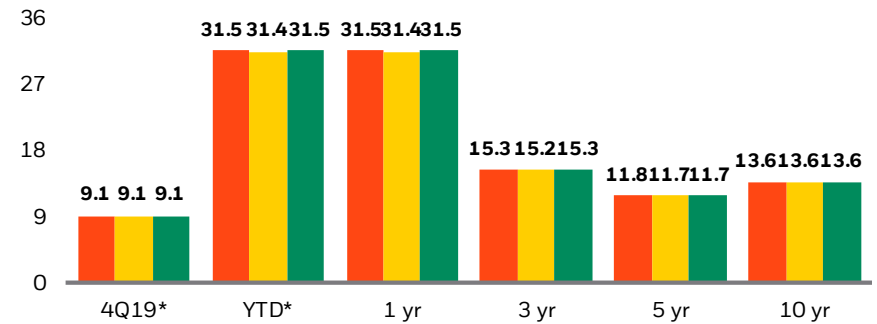
12-month total return in USD (%)



■ BlackRock S&P 500 Index Separate Account (Americas) (gross)
■ BlackRock S&P 500 Index Separate Account (Americas) (net)
■ Standard & Poors 500 Index Total Return

Composite	1 yr	3 yr	5 yr	10 yr
Tracking error	0.01%	0.01%	0.01%	0.01%
Info ratio	1.06	1.91	3.44	4.04
Sharpe ratio	2.37	1.14	0.90	1.05

Total return in USD (annualized %)



■ BlackRock S&P 500 Index Separate Account (Americas) (gross)
■ BlackRock S&P 500 Index Separate Account (Americas) (net)
■ Standard & Poors 500 Index Total Return

Composite	1 yr	3 yr	5 yr	10 yr
Gross performance	31.50%	15.29%	11.75%	13.62%
Net performance	31.44%	15.24%	11.70%	13.56%
Benchmark performance	31.49%	15.27%	11.70%	13.56%
Active return (gross)	0.01%	0.02%	0.05%	0.06%
Active return (net)	-0.05%	-0.03%	0.00%	0.00%

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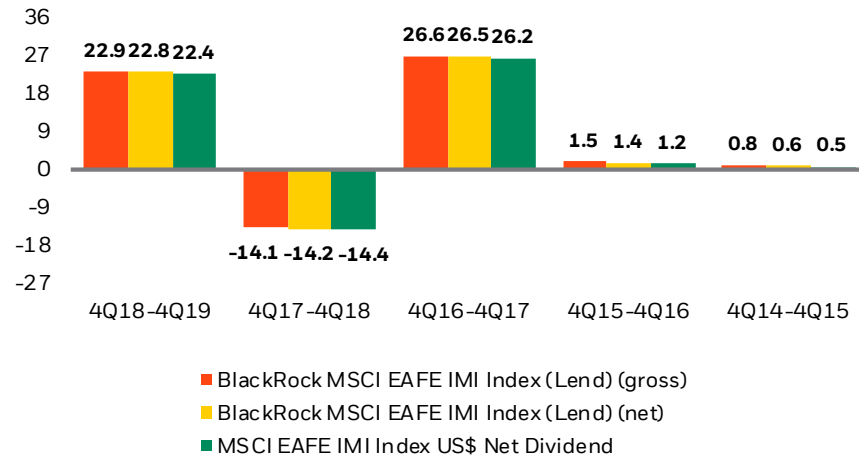
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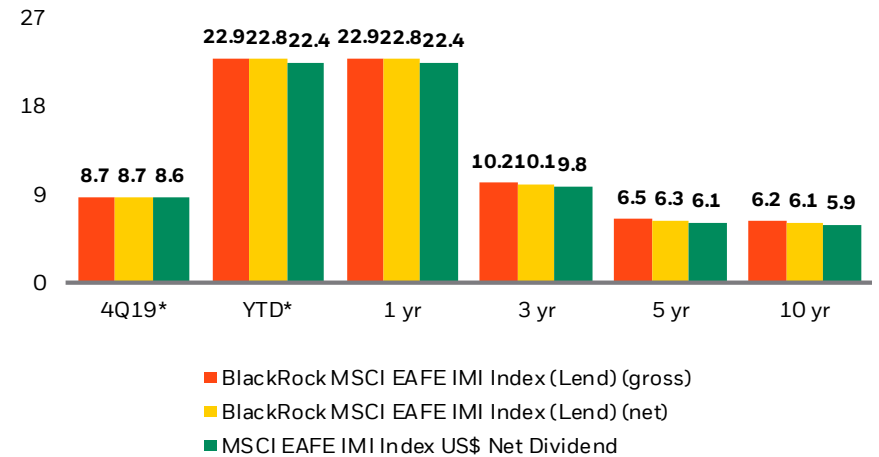
† See page titled "Historical data BlackRock S&P 500 Index Separate Account (Americas) Composite Performance" for GIPS compliant data related to this composite.

BlackRock MSCI EAFE IMI Index (Lend) Composite Performance

12-month total return in USD (%)



Total return in USD (annualized %)



Composite	1 yr	3 yr	5 yr	10 yr
Tracking error	0.11%	0.20%	0.17%	0.16%
Info ratio	4.14	1.98	2.19	2.07
Sharpe ratio	1.86	0.78	0.44	0.39

Composite	1 yr	3 yr	5 yr	10 yr
Gross performance	22.88%	10.15%	6.46%	6.24%
Net performance	22.78%	10.06%	6.34%	6.11%
Benchmark performance	22.44%	9.75%	6.09%	5.90%
Active return (gross)	0.44%	0.40%	0.37%	0.34%
Active return (net)	0.34%	0.31%	0.25%	0.21%

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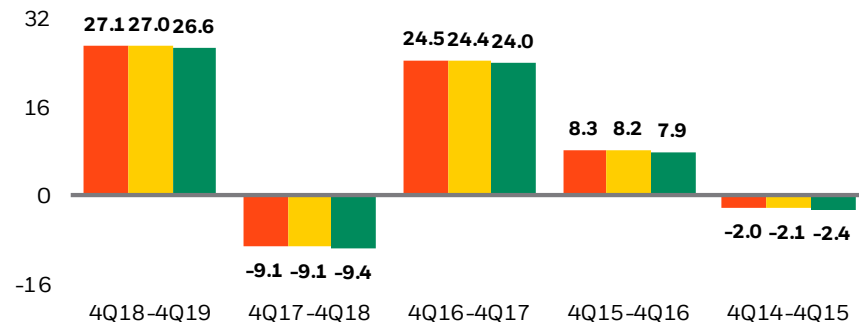
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† See page titled "Historical data BlackRock MSCI EAFE IMI Index (Lend) Composite Performance" for GIPS compliant data related to this composite.

BlackRock MSCI ACWI Index (Lend) Composite Performance

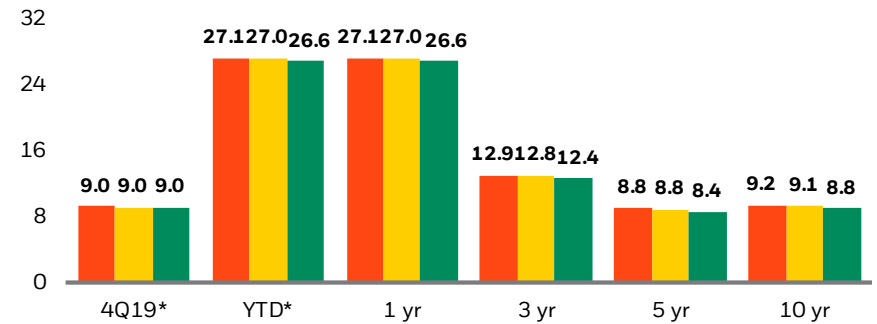
12-month total return in USD (%)



■ BlackRock MSCI ACWI Index (Lend) (gross)
■ BlackRock MSCI ACWI Index (Lend) (net)
■ MSCI-ACWI Index US\$ Net Dividend

Composite	1 yr	3 yr	5 yr	10 yr
Tracking error	0.04%	0.07%	0.06%	0.07%
Info ratio	12.66	5.93	6.78	5.66
Sharpe ratio	2.05	1.00	0.66	0.66

Total return in USD (annualized %)



■ BlackRock MSCI ACWI Index (Lend) (gross)
■ BlackRock MSCI ACWI Index (Lend) (net)
■ MSCI-ACWI Index US\$ Net Dividend

Composite	1 yr	3 yr	5 yr	10 yr
Gross performance	27.06%	12.87%	8.83%	9.19%
Net performance	26.99%	12.81%	8.75%	9.10%
Benchmark performance	26.60%	12.44%	8.41%	8.79%
Active return (gross)	0.46%	0.43%	0.42%	0.40%
Active return (net)	0.39%	0.37%	0.34%	0.31%

The figures shown relate to past performance. Past Performance is not a reliable indicator of current or future results and should not be the sole factor of consideration when selecting a product or strategy.

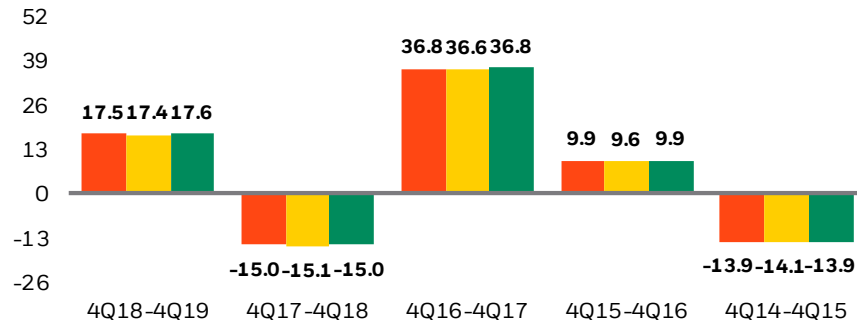
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† See page titled "Historical data BlackRock MSCI ACWI Index (Lend) Composite Performance" for GIPS compliant data related to this composite.

BlackRock MSCI Emerging Markets IMI Index (Lend) Composite Performance

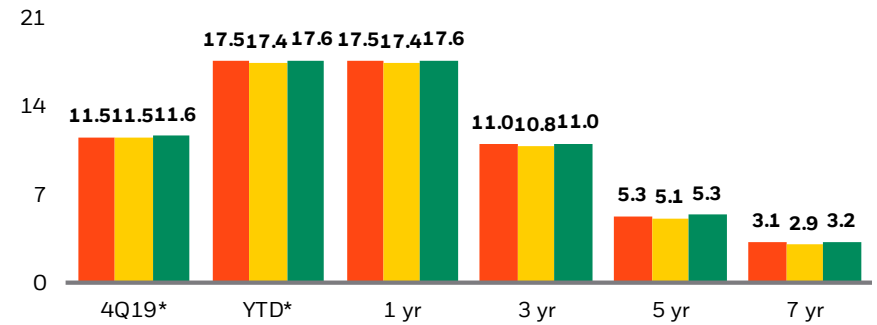
12-month total return in USD (%)



■ BlackRock MSCI Emerging Markets IMI Index (Lend) (gross)
■ BlackRock MSCI Emerging Markets IMI Index (Lend) (net)
■ MSCI Emerging Markets IMI US Net Dividend

Composite	1 yr	3 yr	5 yr	7 yr
Tracking error	0.07%	0.13%	0.14%	0.18%
Info ratio	-1.64	-0.28	-0.18	-0.13
Sharpe ratio	1.00	0.67	0.27	0.16

Total return in USD (annualized %)



■ BlackRock MSCI Emerging Markets IMI Index (Lend) (gross)
■ BlackRock MSCI Emerging Markets IMI Index (Lend) (net)
■ MSCI Emerging Markets IMI US Net Dividend

Composite	1 yr	3 yr	5 yr	7 yr
Gross performance	17.53%	10.96%	5.28%	3.14%
Net performance	17.36%	10.81%	5.09%	2.94%
Benchmark performance	17.64%	11.00%	5.30%	3.16%
Active return (gross)	-0.11%	-0.04%	-0.02%	-0.02%
Active return (net)	-0.28%	-0.19%	-0.21%	-0.22%

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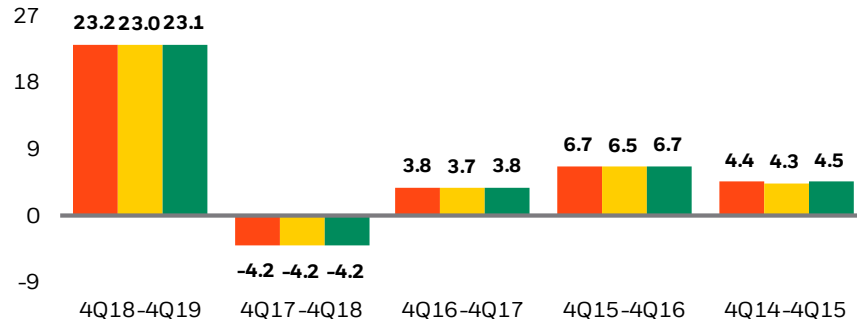
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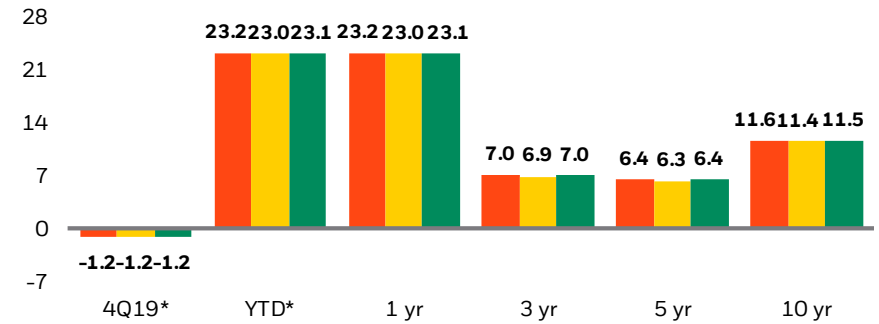
† See page titled "Historical data BlackRock MSCI Emerging Markets IMI Index (Lend) Composite Performance" for GIPS compliant data related to this composite.

BlackRock Dow Jones U.S. Select Real Estate Securities Index (Lend) Composite Performance

12-month total return in USD (%)



Total return in USD (annualized %)



■ BlackRock Dow Jones U.S. Select Real Estate Securities Index (Lend) (gross)
■ BlackRock Dow Jones U.S. Select Real Estate Securities Index (Lend) (net)
■ Dow Jones U.S. Select Real Estate Securities Index Total Return

■ BlackRock Dow Jones U.S. Select Real Estate Securities Index (Lend) (gross)
■ BlackRock Dow Jones U.S. Select Real Estate Securities Index (Lend) (net)
■ Dow Jones U.S. Select Real Estate Securities Index Total Return

Composite	1 yr	3 yr	5 yr	10 yr
Tracking error	0.01%	0.03%	0.03%	0.04%
Info ratio	3.68	1.76	0.82	0.41
Sharpe ratio	1.89	0.45	0.39	0.71

Composite	1 yr	3 yr	5 yr	10 yr
Gross performance	23.15%	7.00%	6.41%	11.56%
Net performance	23.03%	6.89%	6.30%	11.43%
Benchmark performance	23.10%	6.95%	6.39%	11.54%
Active return (gross)	0.05%	0.05%	0.02%	0.02%
Active return (net)	-0.07%	-0.06%	-0.09%	-0.11%

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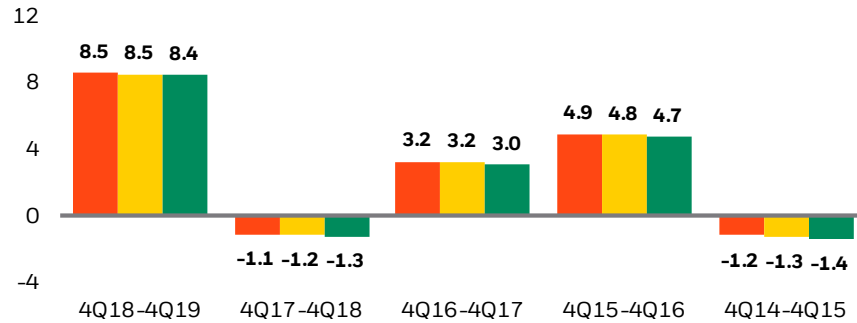
* Unannualized

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† See page titled "Historical data BlackRock Dow Jones U.S. Select Real Estate Securities Index (Lend) Composite Performance" for GIPS compliant data related to this composite.

BlackRock Bloomberg Barclays Treasury Inflation Protection Index (Lend) Composite Performance

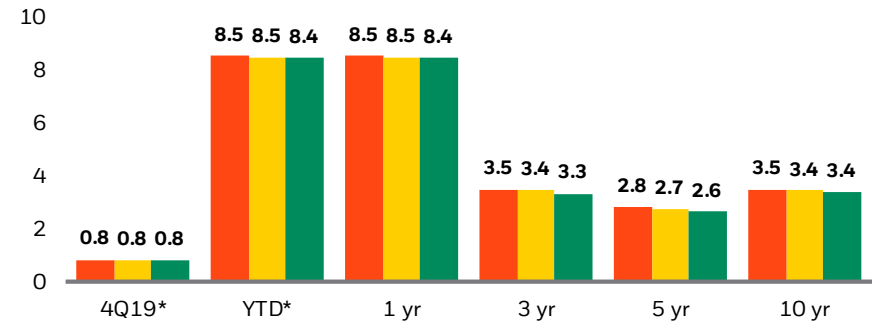
12-month total return in USD (%)



- BlackRock Bloomberg Barclays Treasury Inflation Protection Index (Lend) (gross)
- BlackRock Bloomberg Barclays Treasury Inflation Protection Index (Lend) (net)
- Bloomberg Barclays Treasury Inflation Protection Index Total Return

Composite	1 yr	3 yr	5 yr	10 yr
Tracking error	0.02%	0.03%	0.12%	0.11%
Info ratio	3.92	5.33	1.40	1.06
Sharpe ratio	1.87	0.61	0.50	0.67

Total return in USD (annualized %)



- BlackRock Bloomberg Barclays Treasury Inflation Protection Index (Lend) (gross)
- BlackRock Bloomberg Barclays Treasury Inflation Protection Index (Lend) (net)
- Bloomberg Barclays Treasury Inflation Protection Index Total Return

Composite	1 yr	3 yr	5 yr	10 yr
Gross performance	8.51%	3.47%	2.78%	3.48%
Net performance	8.47%	3.43%	2.74%	3.42%
Benchmark performance	8.43%	3.32%	2.62%	3.36%
Active return (gross)	0.08%	0.15%	0.16%	0.12%
Active return (net)	0.04%	0.11%	0.12%	0.06%

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* Unannualized

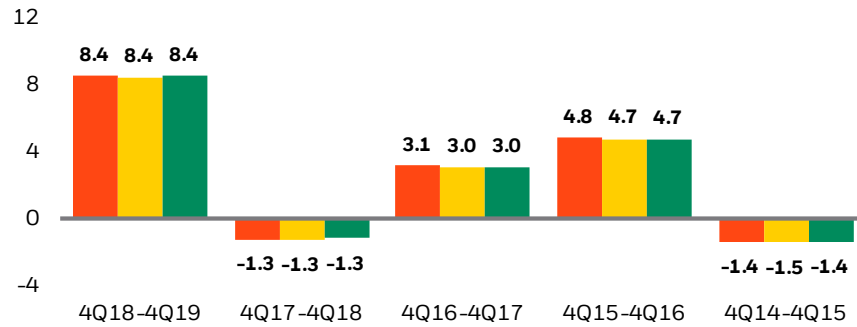
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Results do not reflect the deduction of management/advisory fees and other expenses; management/advisory fees and other expenses will reduce a client's return.

† This information is supplemental for the BlackRock Bloomberg Barclays Treasury Inflation Protection Index (Lend) Composite. See page titled "Historical data BlackRock Bloomberg Barclays Treasury Inflation Protection Index (Lend) Composite Performance" for GIPS compliant data related to this composite.

BlackRock Bloomberg Barclays Treasury Inflation Protection Index Separate Account Composite Performance

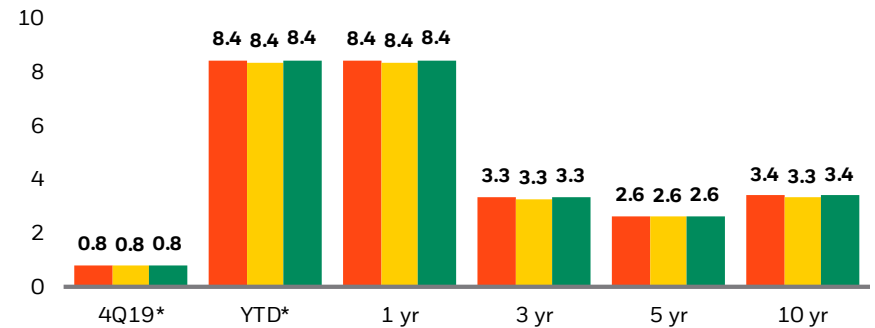
12-month total return in USD (%)



- BlackRock Bloomberg Barclays Treasury Inflation Protection Index Separate Account (gross)
- BlackRock Bloomberg Barclays Treasury Inflation Protection Index Separate Account (net)
- Bloomberg Barclays Treasury Inflation Protection Index Total Return

Composite	1 yr	3 yr	5 yr	10 yr
Tracking error	0.04%	0.05%	0.04%	0.05%
Info ratio	-0.66	0.02	0.32	0.27
Sharpe ratio	1.84	0.56	0.46	0.65

Total return in USD (annualized %)



- BlackRock Bloomberg Barclays Treasury Inflation Protection Index Separate Account (gross)
- BlackRock Bloomberg Barclays Treasury Inflation Protection Index Separate Account (net)
- Bloomberg Barclays Treasury Inflation Protection Index Total Return

Composite	1 yr	3 yr	5 yr	10 yr
Gross performance	8.40%	3.32%	2.63%	3.37%
Net performance	8.35%	3.26%	2.58%	3.30%
Benchmark performance	8.43%	3.32%	2.62%	3.36%
Active return (gross)	-0.03%	0.00%	0.01%	0.01%
Active return (net)	-0.08%	-0.06%	-0.04%	-0.06%

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* Unannualized

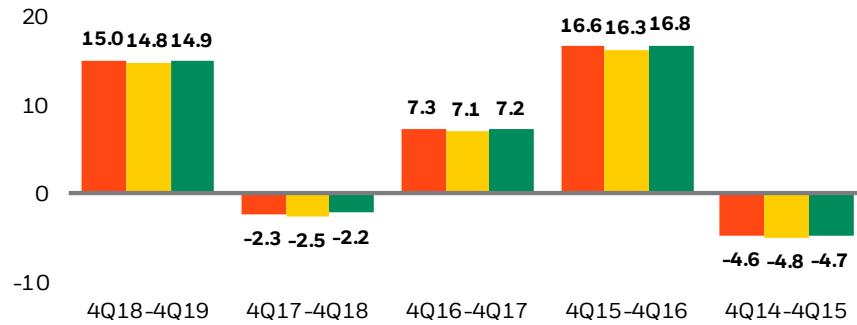
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Results do not reflect the deduction of management/advisory fees and other expenses; management/advisory fees and other expenses will reduce a client's return.

† This information is supplemental for the BlackRock Bloomberg Barclays Treasury Inflation Protection Index Separate Account Composite. See page titled "Historical data BlackRock Bloomberg Barclays Treasury Inflation Protection Index Separate Account Composite Performance" for GIPS compliant data related to this composite.

BlackRock Bloomberg Barclays U.S. High Yield 500MM 2% Issuer Cap Index (Non-Lend) Composite Performance

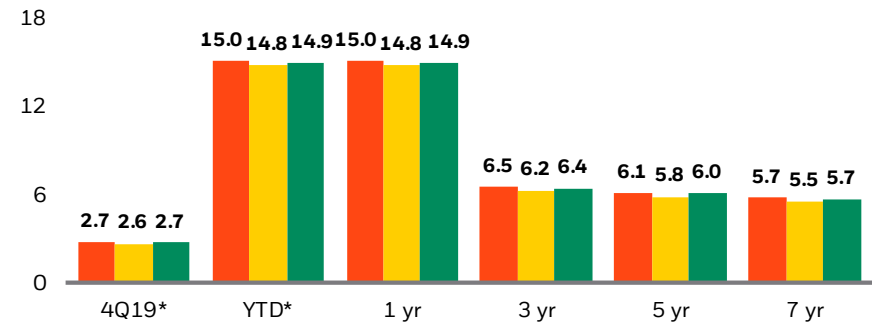
12-month total return in USD (%)



- Bloomberg Barclays U.S. High Yield 500MM 2% Issuer Cap Index (Non-Lend) (gross)
- Bloomberg Barclays U.S. High Yield 500MM 2% Issuer Cap Index (Non-Lend) (net)
- Bloomberg Barclays U.S. HY 500MM 2% Issuer Cap Index Total Return

Composite	1 yr	3 yr	5 yr	7 yr
Tracking error	0.08%	0.08%	0.15%	0.15%
Info ratio	1.68	0.42	0.03	0.25
Sharpe ratio	2.52	1.13	0.93	0.94

Total return in USD (annualized %)



- Bloomberg Barclays U.S. High Yield 500MM 2% Issuer Cap Index (Non-Lend) (gross)
- Bloomberg Barclays U.S. High Yield 500MM 2% Issuer Cap Index (Non-Lend) (net)
- Bloomberg Barclays U.S. HY 500MM 2% Issuer Cap Index Total Return

Composite	1 yr	3 yr	5 yr	7 yr
Gross performance	15.02%	6.45%	6.05%	5.72%
Net performance	14.79%	6.24%	5.82%	5.49%
Benchmark performance	14.89%	6.42%	6.04%	5.68%
Active return (gross)	0.13%	0.03%	0.01%	0.04%
Active return (net)	-0.10%	-0.18%	-0.22%	-0.19%

The figures shown relate to past performance. Past performance is not a reliable indicator of current or future results and should not be the sole factor of consideration when selecting a product or strategy.

* Unannualized

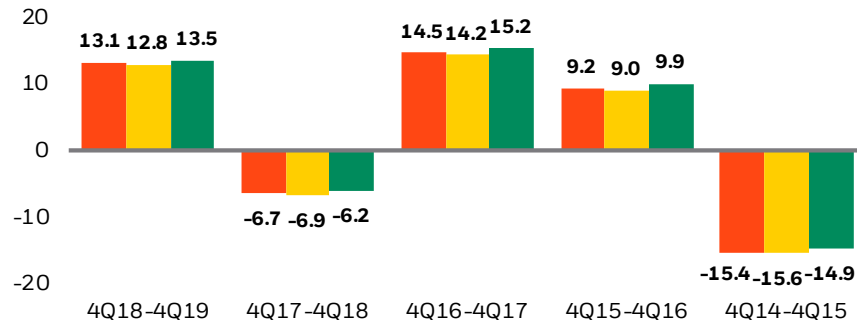
Certain performance results do not reflect the deduction of management/advisory fees and other expenses; management/ advisory fees and other expenses will reduce a client's return. For example, assuming an annual gross return of 8% and an annual management/advisory fee of 0.25%, the net annualized total return of the portfolio would be 7.74% over a 5-year period. Fees are described in Part 2 of BlackRock's Form ADV. Indexes are unmanaged. It is not possible to invest directly in an index.

Results do not reflect the deduction of management/advisory fees and other expenses; management/advisory fees and other expenses will reduce a client's return.

† This information is supplemental for the BlackRock Bloomberg Barclays U.S. High Yield 500MM 2% Issuer Cap Index (Non-Lend) Composite. See page titled "Historical data BlackRock Bloomberg Barclays U.S. High Yield 500MM 2% Issuer Cap Index (Non-Lend) Composite Performance" for GIPS compliant data related to this composite.

BlackRock JP Morgan Emerging Market Local Currency Index (Non-Lend) Composite Performance

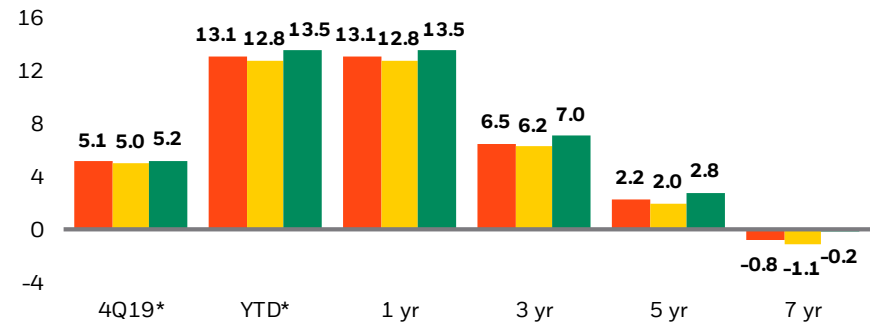
12-month total return in USD (%)



- BlackRock JP Morgan Emerging Market Local Currency Index (Non-Lend) (gross)
- BlackRock JP Morgan Emerging Market Local Currency Index (Non-Lend) (net)
- JP Morgan GBI-EM Global Diversified Index

Composite	1 yr	3 yr	5 yr	7 yr
Tracking error	0.17%	0.18%	0.18%	0.22%
Info ratio	-2.42	-2.84	-2.95	-2.53
Sharpe ratio	1.16	0.52	0.11	-0.14

Total return in USD (annualized %)



- BlackRock JP Morgan Emerging Market Local Currency Index (Non-Lend) (gross)
- BlackRock JP Morgan Emerging Market Local Currency Index (Non-Lend) (net)
- JP Morgan GBI-EM Global Diversified Index

Composite	1 yr	3 yr	5 yr	7 yr
Gross performance	13.06%	6.51%	2.24%	-0.78%
Net performance	12.77%	6.23%	1.96%	-1.07%
Benchmark performance	13.47%	7.03%	2.78%	-0.23%
Active return (gross)	-0.41%	-0.52%	-0.54%	-0.55%
Active return (net)	-0.70%	-0.80%	-0.82%	-0.84%

The figures shown relate to past performance. Past performance is not a reliable indicator of current or future results and should not be the sole factor of consideration when selecting a product or strategy.

* Unannualized

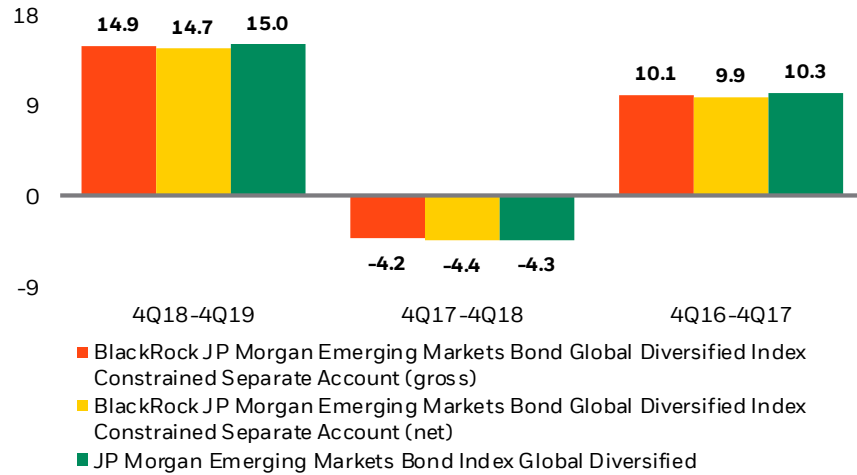
Certain performance results do not reflect the deduction of management/advisory fees and other expenses; management/ advisory fees and other expenses will reduce a client's return. For example, assuming an annual gross return of 8% and an annual management/ advisory fee of 0.25%, the net annualized total return of the portfolio would be 7.74% over a 5-year period. Fees are described in Part 2 of BlackRock's Form ADV. Indexes are unmanaged. It is not possible to invest directly in an index.

Results do not reflect the deduction of management/advisory fees and other expenses; management/ advisory fees and other expenses will reduce a client's return.

† This information is supplemental for the BlackRock JP Morgan Emerging Market Local Currency Index (Non-Lend) Composite. See page titled "Historical data BlackRock JP Morgan Emerging Market Local Currency Index (Non-Lend) Composite Performance" for GIPS compliant data related to this composite.

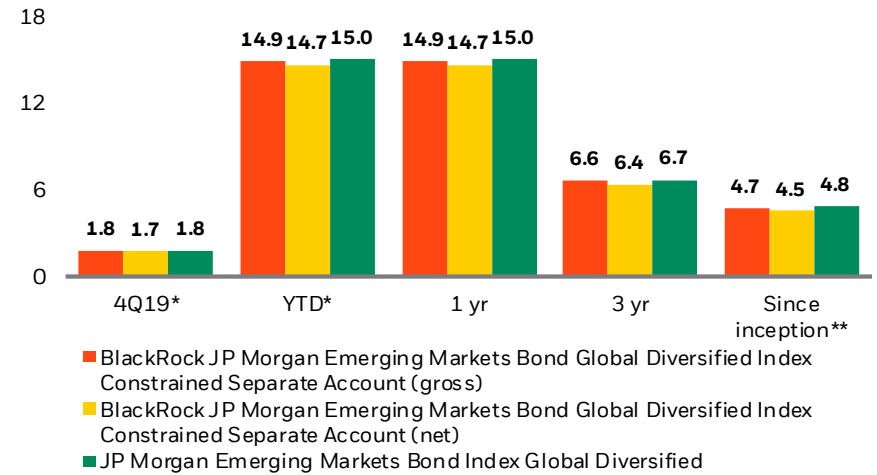
BlackRock JP Morgan Emerging Markets Bond Global Diversified Index Constrained Separate Account Composite Performance

12-month total return in USD (%)



Composite	1 yr	3 yr	Since inception**
Tracking error	0.13%	0.12%	0.12%
Info ratio	-0.95	-0.50	-0.75
Sharpe ratio	2.59	1.03	0.59

Total return in USD (annualized %)



Composite	1 yr	3 yr	Since inception**
Gross performance	14.91%	6.62%	4.73%
Net performance	14.66%	6.39%	4.50%
Benchmark performance	15.04%	6.69%	4.82%
Active return (gross)	-0.13%	-0.07%	-0.09%
Active return (net)	-0.38%	-0.30%	-0.32%

The figures shown relate to past performance. Past performance is not a reliable indicator of current or future results and should not be the sole factor of consideration when selecting a product or strategy.

* Unannualized

** Inception 30 September 2016

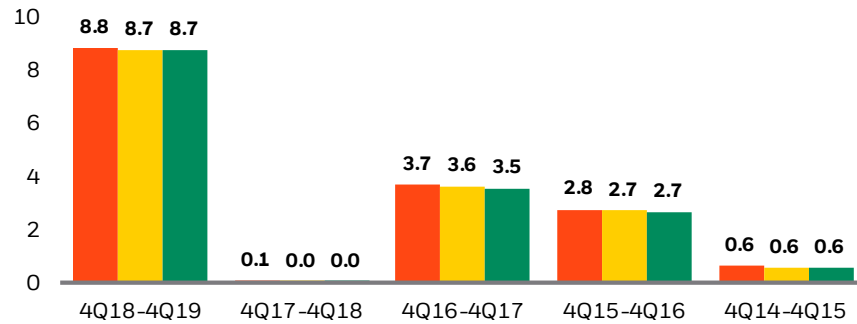
Certain performance results do not reflect the deduction of management/advisory fees and other expenses; management/ advisory fees and other expenses will reduce a client's return. For example, assuming an annual gross return of 8% and an annual management/advisory fee of 0.25%, the net annualized total return of the portfolio would be 7.74% over a 5-year period. Fees are described in Part 2 of BlackRock's Form ADV. Indexes are unmanaged. It is not possible to invest directly in an index.

Results do not reflect the deduction of management/advisory fees and other expenses; management/advisory fees and other expenses will reduce a client's return.

† This information is supplemental for the BlackRock JP Morgan Emerging Markets Bond Global Diversified Index Constrained Separate Account Composite. See page titled "Historical data BlackRock JP Morgan Emerging Markets Bond Global Diversified Index Constrained Separate Account Composite Performance" for GIPS compliant data related to this composite.

BlackRock Bloomberg Barclays Aggregate Bond Index (Lend) Composite Performance

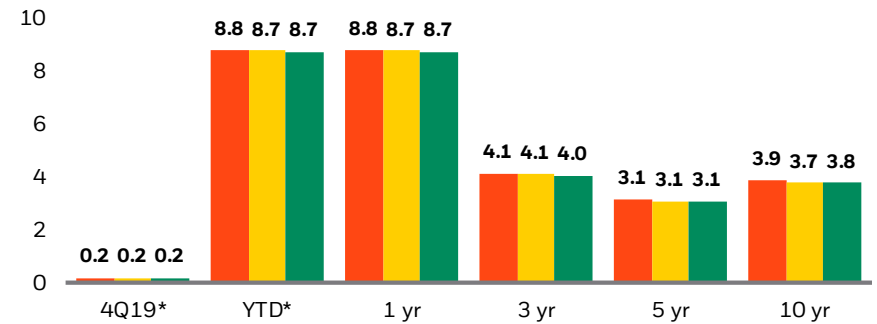
12-month total return in USD (%)



- BlackRock Bloomberg Barclays Aggregate Bond Index (Lend) (gross)
- BlackRock Bloomberg Barclays Aggregate Bond Index (Lend) (net)
- Bloomberg Barclays Aggregate Bond Index Total Return

Composite	1 yr	3 yr	5 yr	10 yr
Tracking error	0.03%	0.03%	0.07%	0.10%
Info ratio	3.01	3.61	1.42	1.21
Sharpe ratio	1.98	0.85	0.68	1.15

Total return in USD (annualized %)



- BlackRock Bloomberg Barclays Aggregate Bond Index (Lend) (gross)
- BlackRock Bloomberg Barclays Aggregate Bond Index (Lend) (net)
- Bloomberg Barclays Aggregate Bond Index Total Return

Composite	1 yr	3 yr	5 yr	10 yr
Gross performance	8.79%	4.12%	3.14%	3.86%
Net performance	8.74%	4.07%	3.08%	3.74%
Benchmark performance	8.72%	4.03%	3.05%	3.75%
Active return (gross)	0.07%	0.09%	0.09%	0.11%
Active return (net)	0.02%	0.04%	0.03%	-0.01%

The figures shown relate to past performance. Past performance is not a reliable indicator of current or future results and should not be the sole factor of consideration when selecting a product or strategy.

* Unannualized

Certain performance results do not reflect the deduction of management/advisory fees and other expenses; management/ advisory fees and other expenses will reduce a client's return. For example, assuming an annual gross return of 8% and an annual management/ advisory fee of 0.25%, the net annualized total return of the portfolio would be 7.74% over a 5-year period. Fees are described in Part 2 of BlackRock's Form ADV. Indexes are unmanaged. It is not possible to invest directly in an index.

Results do not reflect the deduction of management/advisory fees and other expenses; management/ advisory fees and other expenses will reduce a client's return.

† This information is supplemental for the BlackRock Bloomberg Barclays Aggregate Bond Index (Lend) Composite. See page titled "Historical data BlackRock Bloomberg Barclays Aggregate Bond Index (Lend) Composite Performance" for GIPS compliant data related to this composite.

VIII. Appendix

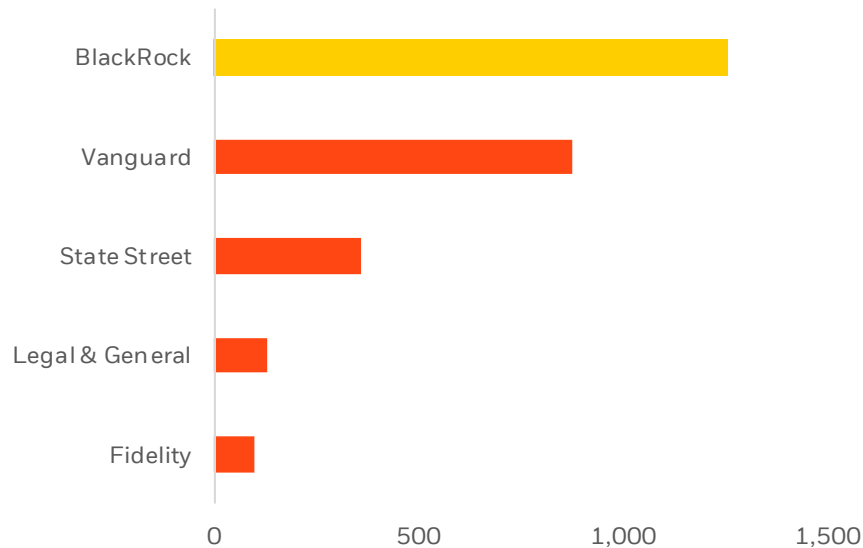
Platform Offerings

BlackRock is a global leader in fixed income indexing

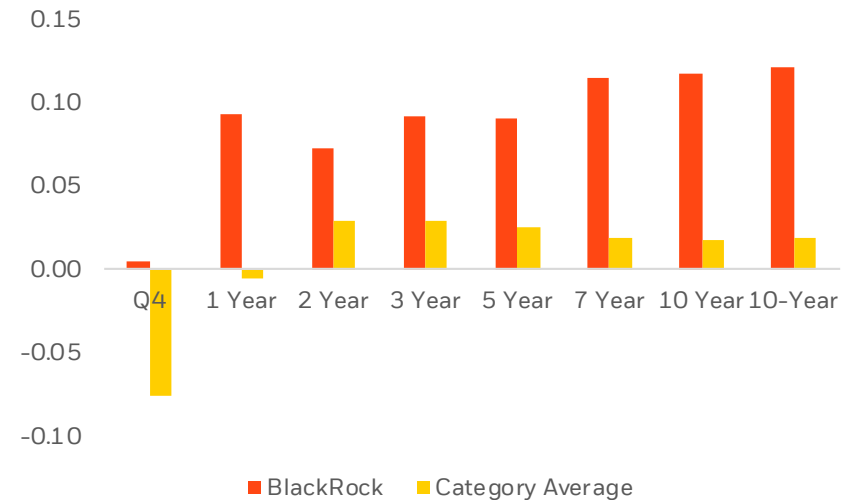
There are four key reasons to pick BlackRock over any other index provider:

- Low historical tracking error across fixed income index strategies
- An experienced, stable team
- Potential for Low transaction costs from size and scale
- Transparent pricing and no cross subsidization as BlackRock has no custody business

Global Fixed Income Index Market AUM (\$bn)¹



Gross Tracking Difference vs. BBG Barclays US Aggregate Index²



1 Source: Pension & Investments. All dollar values are in \$ billions.; data as of 30 June 2019. Managers included based on largest global fixed income index market AUM per Pension & Investments.

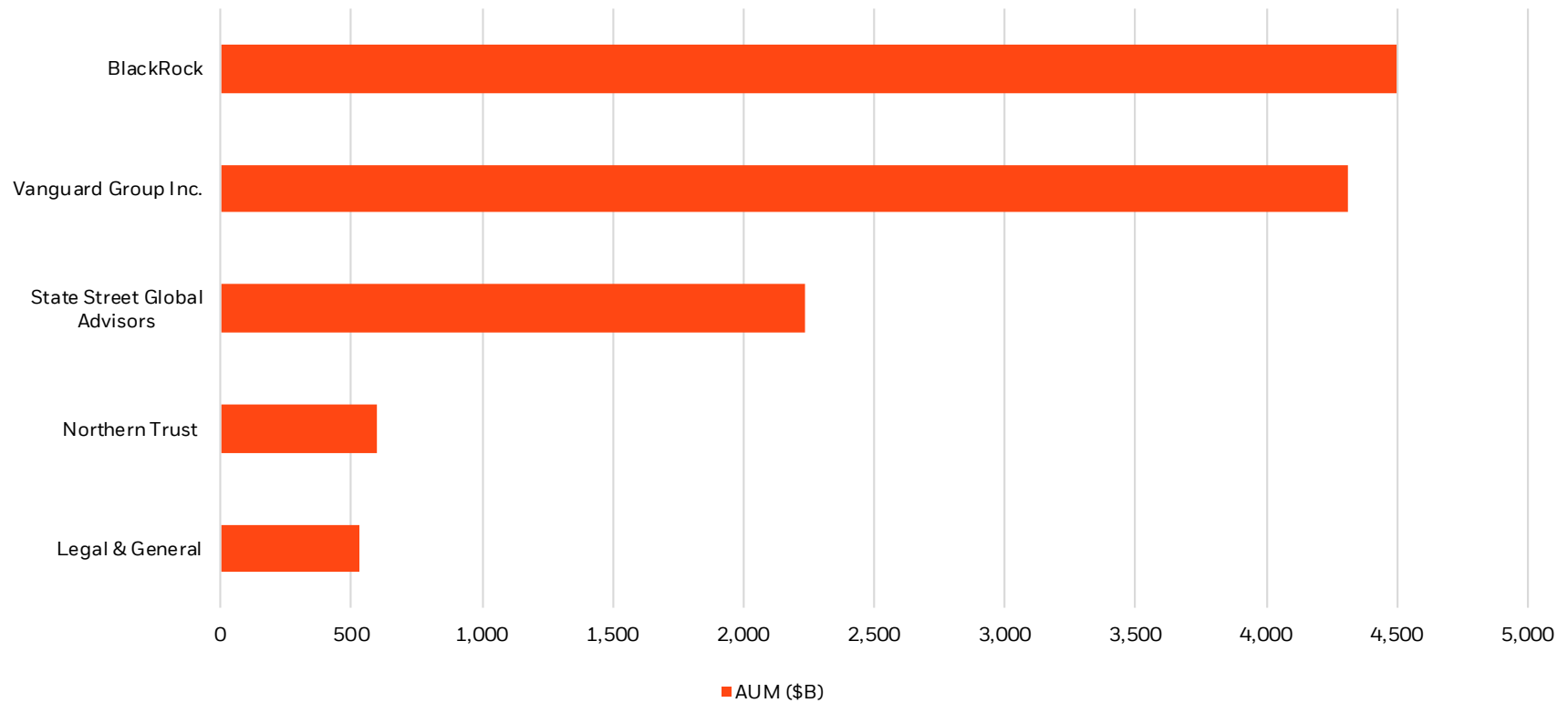
2 Source: eVestment; data as of 31 December 2019. Periods less than a year are not annualized. Indexes are unmanaged and one cannot invest directly in an index. Managers on the right are different from those with the largest Index AUM due to product availability or missing data. The Category Average includes all passive index funds available on eVestment managed against the Bloomberg Barclays US Aggregate Index. Category Average depicts tracking difference, defined as risk in excess of the benchmark, vs. the Bloomberg Barclays US Aggregate Index. The Fund's net asset value does not include an accrual for the investment management fee but does include an accrual for fund level administrative costs and, if applicable, certain third party acquired fund fees and expenses. If the Fund's net asset value did include an accrual for the investment management fee, the Fund's returns would be lower. **Past performance is not necessarily an indicator of future performance.** All periods contain 11 managers in the universe except the 10-Year period, which contains 10. BlackRock is included in the universe. Please see slide 20 for the Fund's full performance track record.

BlackRock is the Market Leader in Equity Indexing

BlackRock is the world's largest manager in indexed assets

- ▶ BlackRock is the global market leader with \$4.50TN in index AUM across equity and fixed income

Top 5 Index Managers



Source: Pensions & Investments (AUM data as of 6/30/2019)

BlackRock's scale can drive lower costs

BlackRock transaction costs vs. ex-ante estimates¹



The scale of BlackRock's index platform can lower transaction costs in the following ways:

- The size of our trading footprint allows us to negotiate low commission rates
- The diversity of our client base, coupled with the range of indices we manage assets against, results in an unparalleled internal market place for crossing
- Large seasoned funds may require less market trading for flows relative to small asset pools

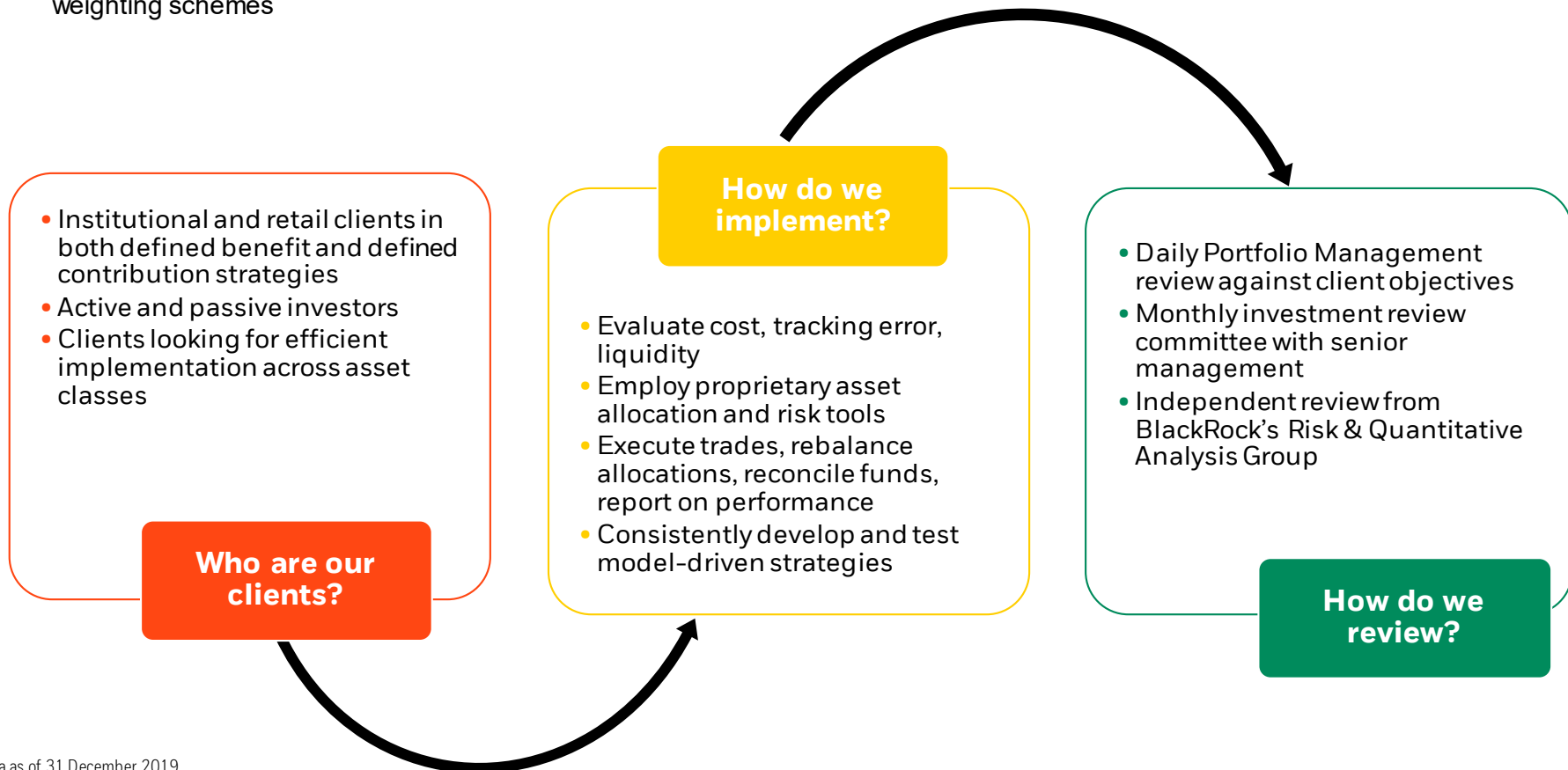
Source: BlackRock. BlackRock Flagship Index Funds shown.

¹ Estimated transaction costs includes commissions and taxes based on BlackRock's current standard negotiated rates. Historical transaction costs are not indicative of future results.

Index Asset Allocation Overview

The Index Asset Allocation Team (IAA) manages custom fund-of-fund strategies across multiple asset classes

- Team skilfully manages to third party benchmarks, client-specified policy weights or BlackRock-derived model portfolios
- Team can implement across various vehicle types, including: mutual funds, exchange traded funds and collective trust funds
- 1,000+ institutional client portfolios with total assets over \$650bn
- Example implementations include: target date funds, liquidity strategies, smart beta factor strategies, custom country/regional weighting schemes



Data as of 31 December 2019

IAA Implementation

IAA leverages proprietary technology to help reduce risk to custom benchmarks

- IAA uses A4, a tool within Aladdin, specifically built for managing allocated portfolios
- A4 system can be used to implement model portfolios, manage custom funds and to account for client-driven specifications
- A4 enables portfolio managers to create rules-based rebalancing schedules and systematically manage portfolio risk to models and benchmarks

Simple way to manage allocation underlying funds

Tolerances for each underlying fund, included in client guidelines

Custom account information

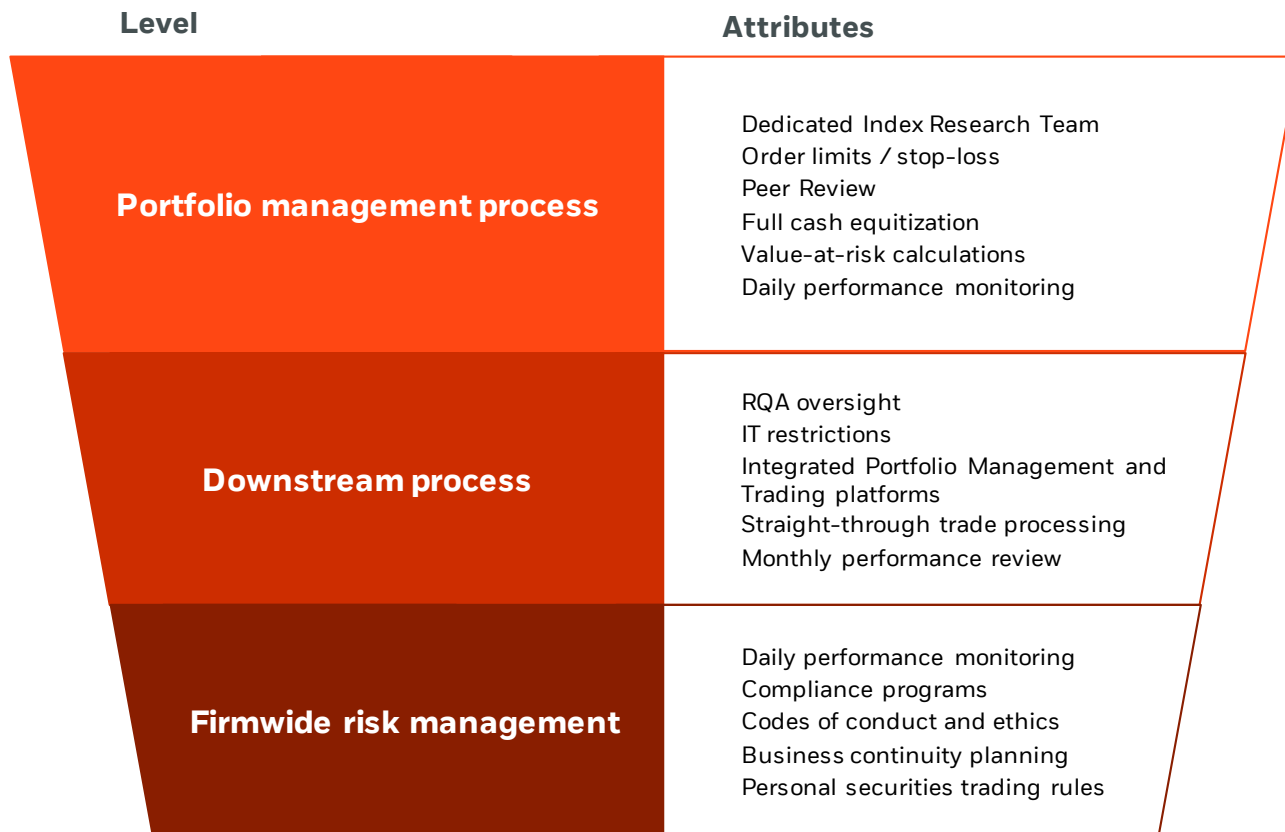
The screenshot displays the Aladdin Automated Asset Allocation interface. The top section shows portfolio details for '830T-2W' as of 09-Oct-2018. Below this, a table lists various underlying funds with columns for Name, MV, %MV, %Lower Constraint, %Upper Constraint, %MV Active, and Order Value. A callout box highlights the 'Simple way to manage allocation underlying funds' and 'Tolerances for each underlying fund, included in client guidelines' areas. The middle section shows 'Proposed Orders (3)' with columns for Portfolio, Security, Source, and Order details. A callout box highlights 'Resulting orders sent electronically for execution'. The bottom section shows a 'Risk' summary table with columns for Portfolio, Status, Risk Benchmark, Portfolio Risk, New Portfolio Risk, Benchmark Risk, Active Risk, New Active Risk, Portfolio Risk Change, and Active Risk Change. A callout box highlights 'Risk tool enables scaled risk monitoring across multiple portfolios simultaneously'.

Screenshots are for illustrative purposes only. References to specific securities or positions are included solely to help illustrate the implementation process and should not be construed as a recommendation to buy or sell any securities. Actual BlackRock portfolios may or may not currently hold positions in the securities mentioned.

Multi-dimensional approach to risk management

BlackRock has long been recognized for its rigorous approach to risk management

- Aladdin®, our proprietary technology suite, provides risk management and trade processing tools
- Our dedicated Risk & Quantitative Analysis Group provides independent oversight to help portfolio managers identify, monitor and minimize risks throughout the investment process



Insights shared through Index Equity thought leadership



White papers offer in-depth research on passive strategies, supported by the firm's expertise across benchmarks, client groups and regions

Recent topics:

- ▶ *A Different Route: Capturing Emerging Markets Growth in a New Way*
- ▶ *Alternative Equity Beta Indices: What You Should Know About Non-Cap-Weighted Benchmarks*
- ▶ *A More Holistic Framework for Global Equities: Expanding Allocations to Include Global Small Caps*
- ▶ *Crossing the Frontier: Complete International Equity Exposure and Improve Portfolio Diversification With Frontier Markets*



Market commentaries provide timely, insightful views on the passive landscape through current events

Recent topics:

- ▶ *When Less is Really More: Testing Low Volatility Strategies In Volatile Times*
- ▶ *Identifying Firearm Related Companies: Understanding Index Membership*
- ▶ *The Final Frontier: Complete International Equity Exposure and Improve Portfolio Diversification With Frontier Markets*
- ▶ *Changes Afoot in Equity Index ETFs and Mutual Funds*

Platform Offerings: Global Fixed Income Products

Index & ETF

Index	ETF
<p>US Strategies</p> <ul style="list-style-type: none"> Barclays Aggregate Intermediate Aggregate Government/Credit 1-3 Year Government/Credit Intermediate Government/Credit Long Government/Credit Government <ul style="list-style-type: none"> Treasury (multiple maturities) TIPS <ul style="list-style-type: none"> 0-5 Year TIPS 20+ Year STRIPS Intermediate Government Long Government Investment Grade Credit 1-3 Year Credit Intermediate Credit Long Credit Long Corporate High Yield Credit Mortgage-Backed Securities Asset-Backed Securities Commercial Mortgage-Backed Securities Synthetic US Fixed Rate Treasury US Fixed Rate Fixed Income Balanced Risk <p>Canada</p> <ul style="list-style-type: none"> FTSE TMX Canada <ul style="list-style-type: none"> Universe Long Corporate Government Long Government Real Return 20+ Strips 	<p>UK</p> <ul style="list-style-type: none"> Credit Government (multiple maturities) Government/Credit Inflation Linked <p>Europe</p> <ul style="list-style-type: none"> Credit Government Government/Credit Inflation Linked <p>Australia</p> <ul style="list-style-type: none"> Government/Credit <p>Emerging Markets</p> <ul style="list-style-type: none"> USD Emerging Markets Local Currency EM Debt <p>Global</p> <ul style="list-style-type: none"> Aggregate Aggregate ex-USD Credit Governments Inflation Linked
<p>US Strategies</p> <ul style="list-style-type: none"> Barclays US Aggregate Barclays US Universal Active Short Duration Fixed Income Balanced Risk Government <ul style="list-style-type: none"> Treasury (multiple maturities) TIPS (multiple maturities) Agency Debt Treasury Floaters Municipals <ul style="list-style-type: none"> National California New York AMT-Free Series Short Active Muni Government/Credit <ul style="list-style-type: none"> Government/Credit Intermediate Government/Credit 10+ Year Government/Credit Credit <ul style="list-style-type: none"> Investment Grade Short Investment Grade High Yield Short High Yield Interest Rate Hedged 1-3 Year Credit 10+ Year Credit Intermediate Credit Floating Rate Note Baa-Ba Rated Corporates B-Ca Rated Corporates Utilities Industrials Financials US Corporate Target Date Maturity Edge Defensive High Yield Edge Enhanced Investment Grade ESG Corporate Bonds 	<ul style="list-style-type: none"> Mortgage-Backed Securities <p>Mexico</p> <ul style="list-style-type: none"> Government Credit <p>Canada</p> <ul style="list-style-type: none"> FTSE TMX Canada <ul style="list-style-type: none"> Universe Long Short Corporate Government <p>UK</p> <ul style="list-style-type: none"> Credit Government (multiple maturities) Inflation Linked <p>Europe</p> <ul style="list-style-type: none"> Credit Short Duration Credit Interest Rate Hedged Government (multiple maturities) Inflation Linked Covered Bond iShares iBond <p>Germany</p> <ul style="list-style-type: none"> Credit Government (multiple maturities) Pfandbriefe <p>Emerging Markets</p> <ul style="list-style-type: none"> USD Emerging Markets Local currency EM Debt Emerging Markets Corporates Emerging Markets High Yield <p>Global/International</p> <ul style="list-style-type: none"> Global Inflation Linked International Inflation Linked International 1-3 Treasury International Treasury Global High Yield Global ex-US High Yield

As of 31 December 2019

Platform offerings: Index strategies

Equity

US Equity Index Funds

S&P Indexes

S&P 500
 S&P/Citigroup Value
 S&P/Citigroup Growth
 S&P 400 Mid Cap
 S&P 500 Equal Weighted

Dow Jones Indexes

US Equity Market (DJ Total Stock Market)
 Extended Market (DJ Completion Total Sk Mkt)

Russell Indexes

Russell 3000
 Russell 2500
 Russell 1000
 Russell 1000 Value
 Russell 1000 Growth
 Russell 2000
 Russell 2000 Value
 Russell 2000 Growth

MSCI Indexes

MSCI US
 MSCI US IMI
 MSCI US Small Cap

Developed International Index Funds

MSCI Canada Index
 MSCI EAFE ex-Japan
 MSCI EMU and EMU IMI
 MSCI EAFE Hedged
 MSCI Europe
 MSCI Pac Rim
 MSCI World
 MSCI World ex-US
 Russell Developed ex-US Large Cap

Developed International Index Funds (cont.)

MSCI EAFE Index

Australia	Hong Kong	Norway
Austria	Ireland	Portugal
Belgium	Italy	Singapore
Denmark	Israel	Spain
Finland	Japan	Sweden
France	Netherlands	Switzerland
Germany	New Zealand	UK

Integrated International Broad and Small Cap Index Strategies

MSCI ACWI and ACWI IMI
 MSCI ACWI ex-US & ACWI ex US IMI
 MSCI Global Investable Market Indices
 MSCI EAFE Small Cap
 MSCI Canada Small Cap
 MSCI World Small Cap
 World ex-US Small Cap
 MSCI Emerging Markets Small Cap
 MSCI ACWI ex US Small Cap

Emerging Markets Index Funds

MSCI EM Index

Brazil	Hungary	Russia
Chile	India	South Africa
China	Indonesia	South Korea
Colombia	Malaysia	Taiwan
Czech Rep.	Pakistan	Thailand
Egypt	Peru	Turkey
Greece	Philippines	Qatar
UAE	Poland	

MSCI Frontier Markets Index

Frontier Markets ex-GCC Index

Sustainable Investing

Developed ex-Fossil Fuel
 ACWI ex Fossil Fuels ESG Focus Index
 ACWI ESG Focus Index

Index Plus Strategies

S&P 500	EM
Russell 1000	World ex-US Small Cap
EAFE	ACWI ex-US
World ex-US	World ex-US IMI

Non-Lending Funds

S&P 100	
S&P 500	
S&P 400	
Russell 1000, V, G	EM
Russell 2000	EM IMI
Russell 2500	EM Small Cap
Russell 3000	ACWI
Russell Midcap	ACWI ex-US
EAFE	ACWI ex-US IMI
EAFE Small Cap	World
Canada	World ex-US
Canada Small Cap	World ex-US Small Cap
Russell Developed ex-US Lg Cap	

Alternatives

US Commodity Funds

S&P GSCI Total Return Indexes
 Bloomberg Commodity Index
 Commodity Smart Beta

Real Estate Investment Trust (REITs) and Infrastructure Indices

DJ US Real Estate Securities Index (RESI)
 MSCI US REIT Index
 FTSE EPRA/NAREIT Developed ex-US Index
 FTSE EPRA/NAREIT Developed Index
 DJ Brookfield Global Infrastructure Developed REIT – Non-lending
 Global Real Estate – Non-lending

Smart Beta

Russell Defensive Indices
 FTSE RAFI Indices
 FTSE EDHEC Efficient US
 MSCI Minimum Volatility Indices
 MSCI Diversified Multi-Factor Indices
 Equal and GDP-Weighted Indices
 MSCI USA Risk-Weighted Index
 MSCI USA Value Index
 MSCI USA Momentum Index

Custom Strategies available

As of 31 December 2019

Platform offerings: Defined Contribution Strategies

BlackRock collective trust funds with daily trading capabilities

Lending Funds

Equity Index Strategies

S&P Indices

S&P 500[®]
 S&P Value
 S&P Growth
 S&P Equal Weighted
 S&P 400 MidCap[®]

Dow Jones Indices

US Equity Market (DJ U.S. Total Stock Market Index™)
 Extended Market (DJ U.S. Completion Total Stock Market Index™)

Russell Indices

Russell 3000[®]
 Russell 2500[®]
 Russell 2000[®]
 Russell 2000 Value[®]
 Russell 2000 Growth[®]
 Russell 1000[®]
 Russell 1000 Value[®]
 Russell 1000 Growth[®]

MSCI Indices

ACWI ex-U.S.
 ACWI ex-U.S. IMI
 EAFE[®]
 EAFE[®] Small Cap
 Emerging Markets
 World ex-U.S.
 World ex-U.S. Small Cap Plus

REIT Index Strategies

U.S. Real Estate Index (MSCI REIT)
 Developed Real Estate Index (FTSE/EPRA NAREIT Developed)

Sustainable Investing

ACWI ESG Focus Index

Non-Lending Funds

Equity Index Strategies

S&P Indices

S&P 500[®]
 S&P 400 MidCap[®]

Russell Indices

Russell 3000[®]
 Russell 2500[®]
 Russell 2000[®]
 Russell 1000[®]
 Russell 1000[®] Value
 Russell 1000[®] Growth

MSCI Indices

ACWI IMI
 ACWI ex-U.S.
 ACWI ex-U.S. IMI
 EAFE
 Emerging Markets

FTSE Indices

FTSE RAFI Emerging Index

Short Term Investment Fund

Government Short-Term Investment Fund

Other Strategies

Developed Real Estate Index
 Bloomberg Commodity Index Total Return
 Bloomberg Roll Select Commodity Index Total Return

Asset Allocation Strategies

LifePath[®] Index Non-Lendable
 Strategic Completion Non-Lendable

As of 31 December 2019

IX. Disclosures

Important Notes

THE INFORMATION CONTAINED HEREIN MAY BE PROPRIETARY IN NATURE AND HAS BEEN PROVIDED TO YOU ON A CONFIDENTIAL BASIS, AND MAY NOT BE REPRODUCED, COPIED OR DISTRIBUTED WITHOUT THE PRIOR CONSENT OF BLACKROCK, INC. ("BLACKROCK"). These materials are not an advertisement and are not intended for public use or dissemination.

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Any reference herein to any security and/or a particular issuer shall not constitute a recommendation to buy or sell, offer to buy, offer to sell, or a solicitation of an offer to buy or sell any such securities issued by such issuer.

Performance and Fees

Past performance is not a guarantee or a reliable indicator of future results. Certain performance figures do not reflect the deduction of investment advisory fees (described in Part 2 of BlackRock's Form ADV) but they do reflect commissions, other expenses (except custody), and reinvestment of earnings. Such fees that a client may incur in the management of their investment advisory account may reduce the client's return. For example, assuming an annual gross return of 8% and an annual management/advisory fee of .40%, the net annualized total return of the portfolio would be 7.58% over a 5-year period. The "net of fees" performance figures reflect the deduction of actual investment advisory fees but do not reflect the deduction of custodial fees. All periods longer than one year are annualized. (Separate account clients may elect to include BlackRock funds in their portfolio; sector funds may be subject to additional terms and fees.)

Credit Quality

The credit quality of a particular security or group of securities does not ensure the stability or safety of an overall portfolio. The Quality ratings of individual issues/issuers are provided to indicate the credit worthiness of such issues/issuer and generally range from AAA, Aaa, or AAA (highest) to D, C, or D (lowest) for S&P, Moody's, and Fitch respectively.

Forward Looking Information

This material may contain "forward-looking" information that is not purely historical in nature. Such information may include, among other things, projections, forecasts, estimates of yields or returns, and proposed or expected portfolio composition. Moreover, where certain historical performance information of other investment vehicles or composite accounts managed by BlackRock, Inc. and/or its subsidiaries (together, "BlackRock") has been included in this material, such performance information is presented by way of example only. No representation is made that the performance presented will be achieved, or that every assumption made in achieving, calculating or presenting either the forward-looking information or the historical performance information herein has been considered or stated in preparing this material. Any changes to assumptions that may have been made in preparing this material could have a material impact on the investment returns that are presented herein by way of example.

Important Notes cont'd

Forecast

This material is not intended to be relied upon as a forecast, research or investment advice, and is not a recommendation, offer or solicitation to buy or sell any securities or to adopt any investment strategy. The opinions expressed are those of the authors and may change as subsequent conditions vary. Individual portfolio managers for BlackRock may have opinions and/or make investment decisions that, in certain respects, may not be consistent with the information contained in this document. The information and opinions contained in this material are derived from proprietary and nonproprietary sources deemed by BlackRock to be reliable, are not necessarily all inclusive and are not guaranteed as to accuracy. Past performance is no guarantee of future results. There is no guarantee that any of these views will come to pass. Reliance upon information in this material is at the sole discretion of the reader.

Index

It is not possible to directly invest in an unmanaged index.

Risk

Investing in the bond market is subject to certain risks including market, interest-rate, issuer, credit, and inflation risk. Equities may decline in value due to both real and perceived general market, economic, and industry conditions. Mortgage and asset-backed securities may be sensitive to changes in interest rates, subject to early repayment risk, and while generally backed by a government, government-agency or private guarantor there is no assurance that the guarantor will meet its obligations. High-yield, lower-rated, securities involve greater risk than higher-rated securities; portfolios that invest in them may be subject to greater levels of credit and liquidity risk than portfolios that do not. Investors will, at times, incur a tax liability. Income from municipal bonds may be subject to state and local taxes and at times the alternative minimum tax. Derivatives may involve certain costs and risks such as liquidity, interest rate, market, credit, management and the risk that a position could not be closed when most advantageous. Investing in derivatives could lose more than the amount invested.

There can be no assurance that the investment objectives of any strategy referred to herein will be achieved. An investment in any strategy referred to herein involves a high degree of risk, including the risk that the entire amount invested may be lost.

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Historical data

BlackRock S&P 500 Index Composite (Americas) (Lending)

Calendar year	Gross of fee composite return (%)	Net of fee composite return (%)	Benchmark return (%)	Number of portfolios	Composite dispersion (%)	Composite 3 yr annualized standard deviation (%)	Benchmark 3 yr annualized standard deviation (%)	Total assets at end of period (USD millions)	Percentage of firm assets
2009	26.80	26.74	26.46	2	0.02	19.64	19.63	53,143	2
2010	15.20	15.15	15.06	2	0.00	21.87	21.85	44,214	1
2011	2.21	2.16	2.11	2	0.00	18.72	18.71	45,183	1
2012	16.06	16.01	16.00	2	0.00	15.10	15.09	52,527	1
2013	32.43	32.36	32.39	2	0.00	11.94	11.94	61,816	1
2014	13.74	13.68	13.69	2	0.00	8.97	8.97	68,244	1
2015	1.46	1.40	1.38	2	0.01	10.47	10.47	71,969	2
2016	11.99	11.94	11.96	2	0.00	10.59	10.59	85,596	2
2017	21.86	21.84	21.83	2	0.00	9.92	9.92	79,016	1
2018	-4.35	-4.37	-4.38	2	0.01	10.80	10.80	78,863	1

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Please see the following page for important disclosures related to this composite.

* Performance results presented for periods prior to 1 December 2009 occurred while members of the portfolio management team were affiliated with another firm ("Prior Firm"). Such members of the portfolio management team were responsible for investment decisions at the Prior Firm and the decision making process has remained intact and independent within BlackRock. See Note 10 on the following page.

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Historical data

BlackRock S&P 500 Index Composite (Americas) (Lending)

Notes

1. For purposes of compliance with the Global Investment Performance Standards (GIPS®), the "firm" refers to the investment adviser and national trust bank subsidiaries of BlackRock, Inc., located globally. This definition excludes: i) BlackRock subsidiaries that do not provide investment advisory or management services, ii) the Absolute Return Strategies (funds-of-hedge-funds) business unit under the "BlackRock Alternative Advisers" platform, iii) BlackRock Capital Investment Corporation, LLC, iv) FutureAdvisor, Inc., and v) Retail mutual funds and separately managed accounts within BlackRock México Operadora, S.A. de C.V., Sociedad Operadora de Fondos de Inversión.
2. BlackRock claims compliance with the GIPS standards and has prepared and presented this report in compliance with the GIPS standards. BlackRock has been independently verified for the periods 1 January 1993 through 31 December 2017. The verification reports are available upon request. Verification assesses whether (1) the firm has complied with all the composite construction requirements of the GIPS standards on a firm-wide basis and (2) the firm's policies and procedures are designed to calculate and present performance in compliance with the GIPS standards. Verification does not ensure the accuracy of any specific composite presentation. The BlackRock S&P 500 Index Composite (Americas) (Lending) has been examined for the periods 1 April 2003 (Inception) through 31 December 2012. The verification and performance examination reports are available upon request. The firm is verified annually by Deloitte & Touche LLP.
3. BlackRock uses a time-weighted linked rate of return formula with adjustments for cash flows to calculate rates of return. Trade date accounting has been used since the inception of the composite. The currency used to calculate performance is US dollars.
4. The benchmark index shown is the Standard & Poor's 500 Index Total Return®.
5. Composite dispersion measures represent the consistency of a firm's composite performance results with respect to the individual portfolio returns within a composite. Dispersion is represented by the asset-weighted standard deviation of only portfolios that have been included in the composite style for a full year. For composites containing only one account, a measure of dispersion is not meaningful (NM).
6. Percentage of Firm Assets are rounded to the nearest whole percent.
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8. When permitted by investment guidelines, derivatives may be used in the portfolio, but is not integral to the investment process. Shorting and leverage are not allowed.
9. Gross of fee performance results are presented before management and custodial fees and net of broker fees, transaction costs, and withholding taxes (if applicable). Certain portfolios may have custodial fees included. As of 1 January 2014, net performance reflects the deduction of the highest management fee per the strategy fee schedule. Prior to this date, net performance reflected the deduction of the highest management fee that could have been charged to any account in the composite. The standard management fee schedule for this strategy for institutional separate accounts is as follows: first \$250 million of assets, 0.02 of 1%; remaining assets in excess of \$250 million, 0.015 of 1%.
10. A complete list and description of all composites maintained by BlackRock and the related performance results are available upon request. Additional information regarding policies for calculating and reporting returns as well as valuation policies is also available upon request.

The **BlackRock S&P 500 Index Composite (Americas) (Lending)** is comprised of all fully discretionary, total return institutional equity funds, which are passively managed to track the performance of the Standard & Poor's 500 Index Total Return®. Accounts in this composite are engaged in securities lending activity. All accounts included in the composite follow a similar investment philosophy. This composite may include accounts with multiple investor types which can have different withholding tax rates applied. The creation date of the composite is 1 November 2010. The composite does not have a Significant Cash Flow Policy.

Performance presented for periods prior to 1 December 2009 occurred while members of the portfolio management team were affiliated with Barclays Global Investors ("Prior Firm"). Such members of the portfolio management team were responsible for investment management decisions for the S&P 500 Index Composite (Americas) (Lending) at the Prior Firm and the decision making process has remained intact and independent within BlackRock. The performance presented is for those portfolios that were brought over to BlackRock from the Prior Firm. In BlackRock management's opinion, such performance track record conforms to the GIPS standards with regard to the portability of investment results, and, as such, all historical performance results from the Prior Firm have been linked to the on-going performance results of the composite. Performance records of the Prior Firm are available upon request.

Historical data

BlackRock MSCI EAFE IMI Index Composite (Lending)

Calendar year	Gross of fee composite return (%)	Net of fee composite return (%)	Benchmark return (%)	Number of portfolios	Composite dispersion (%)	Composite 3 yr annualized standard deviation (%)**	Benchmark 3 yr annualized standard deviation (%)**	Total assets at end of period (USD millions)	Percentage of firm assets
2009	33.69	33.50	33.24	2	0.15	N/A	N/A	9,522	<1
2010	9.63	9.48	9.30	2	0.10	N/A	N/A	11,590	<1
2011	-12.32	-12.44	-12.61	2	0.06	22.42	22.42	10,603	<1
2012	17.99	17.83	17.64	2	0.10	19.28	19.35	13,000	<1
2013	23.87	23.70	23.54	2	0.10	16.14	16.17	14,332	<1
2014	-4.66	-4.79	-4.90	2	0.06	12.95	12.98	13,504	<1
2015	0.75	0.61	0.49	2	0.10	12.22	12.22	13,285	<1
2016	1.53	1.39	1.15	2	0.15	12.34	12.32	20,620	<1
2017	26.60	26.50	26.16	2	0.13	11.75	11.73	24,141	<1
2018	-14.08	-14.15	-14.40	2	0.10	11.46	11.41	20,351	<1

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** N/A – 36 months of data is not available for that period.

Historical data

BlackRock MSCI EAFE IMI Index Composite (Lending)

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4. The benchmark index shown is the MSCI EAFE IMI Index Net Dividend®.
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10. A complete list and description of all composites maintained by BlackRock and the related performance results are available upon request. Additional information regarding policies for calculating and reporting returns as well as valuation policies is also available upon request.

The **BlackRock MSCI EAFE IMI Index Composite (Lending)** is comprised of all fully discretionary, total return institutional equity funds, which are passively managed to track the performance of the MSCI EAFE IMI Index Net Dividend®. Accounts in this composite are engaged in securities lending activity. All accounts included in the composite follow a similar investment philosophy. This composite may include accounts with multiple investor types which can have different withholding tax rates applied. The creation date of the composite is 1 November 2010. The composite does not have a Significant Cash Flow Policy.

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Historical data

BlackRock MSCI Emerging Markets IMI Index Composite (Lending)

Calendar year	Gross of fee composite return (%)	Net of fee composite return (%)	Benchmark return (%)	Number of portfolios	Composite dispersion (%)	Composite 3 yr annualized standard deviation (%)**	Benchmark 3 yr annualized standard deviation (%)**	Total assets at end of period (USD millions)	Percentage of firm assets
01/10/11 - 31/12/11	3.90	3.84	3.84	1	NM	N/A	N/A	104	<1
2012	18.66	18.38	18.68	1	NM	N/A	N/A	524	<1
2013	-2.14	-2.37	-2.20	1	NM	N/A	N/A	1,292	<1
2014	-1.89	-2.12	-1.79	1	NM	14.77	14.78	1,303	<1
2015	-13.86	-14.07	-13.86	1	NM	13.86	13.84	999	<1
2016	9.87	9.61	9.90	1	NM	15.74	15.72	927	<1
2017	36.76	36.56	36.83	1	NM	15.11	15.11	1,450	<1
2018	-15.00	-15.11	-15.05	1	NM	14.42	14.43	1,026	<1

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** N/A – 36 months of data is not available for that period.

Historical data

BlackRock MSCI Emerging Markets IMI Index Composite (Lending)

Notes

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10. A complete list and description of all composites maintained by BlackRock and the related performance results are available upon request. Additional information regarding policies for calculating and reporting returns as well as valuation policies is also available upon request.

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Historical data

BlackRock MSCI ACWI Index Composite (Lending)

Calendar year	Gross of fee composite return (%)	Net of fee composite return (%)	Benchmark return (%)	Number of portfolios	Composite dispersion (%)	Composite 3 yr annualized standard deviation (%)**	Benchmark 3 yr annualized standard deviation (%)**	Total assets at end of period (USD millions)	Percentage of firm assets
2009	35.15	35.03	34.63	1	NM	N/A	N/A	1,795	<1
2010	12.99	12.89	12.67	2	NM	N/A	N/A	2,596	<1
2011	-6.97	-7.06	-7.35	2	0.07	20.56	20.59	2,519	<1
2012	16.58	16.48	16.13	2	0.04	17.10	17.13	2,796	<1
2013	23.22	23.11	22.80	2	0.02	13.90	13.94	3,121	<1
2014	4.53	4.43	4.16	2	0.05	10.47	10.50	3,148	<1
2015	-1.98	-2.07	-2.36	2	0.04	10.77	10.79	2,999	<1
2016	8.31	8.21	7.86	2	0.07	11.05	11.06	3,142	<1
2017	24.45	24.38	23.97	2	0.08	10.35	10.36	3,606	<1
2018	-9.07	-9.12	-9.42	2	0.05	10.48	10.48	3,043	<1

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BlackRock MSCI ACWI Index Composite (Lending)

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3. BlackRock uses a time-weighted linked rate of return formula with adjustments for cash flows to calculate rates of return. Trade date accounting has been used since the inception of the composite. The currency used to calculate performance is US dollars.
4. The benchmark index shown is the MSCI ACWI Index Net Dividend®.
5. Composite dispersion measures represent the consistency of a firm's composite performance results with respect to the individual portfolio returns within a composite. Dispersion is represented by the asset-weighted standard deviation of only portfolios that have been included in the composite style for a full year. For composites containing only one account, a measure of dispersion is not meaningful (NM).
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Historical data

BlackRock Dow Jones US Select Real Estate Securities Index Composite (Lending)

Calendar year	Gross of fee composite return (%)	Net of fee composite return (%)	Benchmark return (%)	Number of portfolios	Composite dispersion (%)	Composite 3 yr annualized standard deviation (%)	Benchmark 3 yr annualized standard deviation (%)	Total assets at end of period (USD millions)	Percentage of firm assets
2009	29.25	29.10	29.01	1	NM	40.88	41.03	404	<1
2010	28.46	28.31	28.47	1	NM	40.97	41.12	313	<1
2011	8.85	8.72	8.87	1	NM	32.65	32.77	549	<1
2012	17.13	16.99	17.09	1	NM	18.49	18.50	1,326	<1
2013	1.33	1.21	1.31	1	NM	16.77	16.78	2,598	<1
2014	31.88	31.72	31.85	1	NM	13.25	13.27	3,308	<1
2015	4.43	4.31	4.46	1	NM	14.51	14.53	3,115	<1
2016	6.66	6.53	6.65	1	NM	15.08	15.10	1,859	<1
2017	3.78	3.68	3.76	1	NM	13.36	13.38	2,156	<1
2018	-4.15	-4.24	-4.22	1	NM	13.50	13.52	1,897	<1

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7. There have been no alterations of the composite due to changes in personnel or other reasons.
8. When permitted by investment guidelines, derivatives may be used in the portfolio, but is not integral to the investment process. Shorting and leverage are not allowed.
9. Gross of fee performance results are presented before management and custodial fees and net of broker fees, transaction costs, and withholding taxes (if applicable). Certain portfolios may have custodial fees included. As of 1 January 2014, net performance reflects the deduction of the highest management fee per the strategy fee schedule. Prior to this date, net performance reflected the deduction of the highest management fee that could have been charged to any account in the composite. The standard management fee schedule for this strategy for institutional separate accounts is as follows: first \$100 million of assets, 0.10 of 1%; remaining assets in excess of \$100 million, 0.08 of 1%.
10. A complete list and description of all composites maintained by BlackRock and the related performance results are available upon request. Additional information regarding policies for calculating and reporting returns as well as valuation policies is also available upon request.

The **BlackRock Dow Jones US Select Real Estate Securities Index Composite (Lending)** is comprised of all fully discretionary, total return institutional equity funds, which are passively managed to track the performance of the Dow Jones US Select Real Estate Securities Index Total Return®. Accounts in this composite are engaged in securities lending activity. All accounts included in the composite follow a similar investment philosophy. This composite may include accounts with multiple investor types which can have different withholding tax rates applied. The creation date of the composite is 1 November 2010. The composite does not have a Significant Cash Flow Policy.

Performance presented for periods prior to 1 December 2009 occurred while members of the portfolio management team were affiliated with Barclays Global Investors ("Prior Firm"). Such members of the portfolio management team were responsible for investment management decisions for the Dow Jones US Select Real Estate Securities Index Composite (Lending) at the Prior Firm and the decision making process has remained intact and independent within BlackRock. The performance presented is for those portfolios that were brought over to BlackRock from the Prior Firm. In BlackRock management's opinion, such performance track record conforms to the GIPS standards with regard to the portability of investment results, and, as such, all historical performance results from the Prior Firm have been linked to the on-going performance results of the composite. Performance records of the Prior Firm are available upon request.

Historical data

BlackRock S&P 500 Index Separate Account Composite (Americas)

Calendar year	Gross of fee composite return (%)	Net of fee composite return (%)	Benchmark return (%)	Number of portfolios	Composite dispersion (%)	Composite 3 yr annualized standard deviation (%)	Benchmark 3 yr annualized standard deviation (%)	Total assets at end of period (USD millions)	Percentage of firm assets
2009	26.68	26.60	26.46	5	0.08	19.62	19.63	70,116	2
2010	15.09	15.02	15.06	5	0.02	21.84	21.85	89,735	3
2011	2.13	2.07	2.11	5	0.01	18.70	18.71	90,724	3
2012	16.10	16.03	16.00	5	0.04	15.09	15.09	102,776	3
2013	32.47	32.39	32.39	5	0.04	11.94	11.94	138,220	3
2014	13.80	13.74	13.69	7	0.05	8.97	8.97	154,581	3
2015	1.48	1.43	1.38	7	0.01	10.47	10.47	146,099	3
2016	12.05	11.99	11.96	6	0.01	10.59	10.59	158,428	3
2017	21.86	21.81	21.83	7	0.00	9.92	9.92	196,374	3
2018	-4.37	-4.41	-4.38	7	0.02	10.80	10.80	179,323	3

The figures shown relate to past performance. Past Performance is not a reliable indicator of future results and should not be the sole factor of consideration when selecting a product or strategy.

Please see the following page for important disclosures related to this composite.

* Performance results presented for periods prior to 1 December 2009 occurred while members of the portfolio management team were affiliated with another firm ("Prior Firm"). Such members of the portfolio management team were responsible for investment decisions at the Prior Firm and the decision making process has remained intact and independent within BlackRock. See Note 10 on the following page.

Data shown may be subject to revisions from time to time based on availability of new information. Any such revisions are not material.

Historical data

BlackRock S&P 500 Index Separate Account Composite (Americas)

Notes

1. For purposes of compliance with the Global Investment Performance Standards (GIPS®), the "firm" refers to the investment adviser and national trust bank subsidiaries of BlackRock, Inc., located globally. This definition excludes: i) BlackRock subsidiaries that do not provide investment advisory or management services, ii) the Absolute Return Strategies (funds-of-hedge-funds) business unit under the "BlackRock Alternative Advisers" platform, iii) BlackRock Capital Investment Corporation, LLC, iv) FutureAdvisor, Inc., and v) Retail mutual funds and separately managed accounts within BlackRock México Operadora, S.A. de C.V., Sociedad Operadora de Fondos de Inversión.
2. BlackRock claims compliance with the GIPS standards and has prepared and presented this report in compliance with the GIPS standards. BlackRock has been independently verified for the periods 1 January 1993 through 31 December 2017. The verification reports are available upon request. Verification assesses whether (1) the firm has complied with all the composite construction requirements of the GIPS standards on a firm-wide basis and (2) the firm's policies and procedures are designed to calculate and present performance in compliance with the GIPS standards. Verification does not ensure the accuracy of any specific composite presentation. The firm is verified annually by Deloitte & Touche LLP.
3. BlackRock uses a time-weighted linked rate of return formula with adjustments for cash flows to calculate rates of return. Trade date accounting has been used since the inception of the composite. The currency used to calculate performance is US dollars.
4. The benchmark index shown is the Standard & Poor's 500 Index Total Return®.
5. Composite dispersion measures represent the consistency of a firm's composite performance results with respect to the individual portfolio returns within a composite. Dispersion is represented by the asset-weighted standard deviation of only portfolios that have been included in the composite style for a full year. For composites containing only one account, a measure of dispersion is not meaningful (NM).
6. Percentage of Firm Assets are rounded to the nearest whole percent.
7. There have been no alterations of the composite due to changes in personnel or other reasons.
8. When permitted by investment guidelines, derivatives may be used in the portfolio, but is not integral to the investment process. Shorting and leverage are not allowed.
9. Gross of fee performance results are presented before management and custodial fees and net of broker fees, transaction costs, and withholding taxes (if applicable). Certain portfolios may have custodial fees included. As of 1 January 2014, net performance reflects the deduction of the highest management fee per the strategy fee schedule. Prior to this date, net performance reflected the deduction of the highest management fee that could have been charged to any account in the composite. The standard management fee schedule for this strategy for institutional separate accounts is as follows: first \$250 million of assets, 0.04 of 1%; remaining assets in excess of \$250 million, 0.035 of 1%.
10. A complete list and description of all composites maintained by BlackRock and the related performance results are available upon request. Additional information regarding policies for calculating and reporting returns as well as valuation policies is also available upon request.

The **BlackRock S&P 500 Index Separate Account Composite (Americas)** is comprised of all fully discretionary, total return separate account equity portfolios, which are passively managed to track the performance of the Standard & Poor's 500 Index Total Return®. Accounts in this composite may engage in securities lending activity under the direction of the client via third parties while other clients may choose not to engage in stock lending. Performance shown above reflects any stock lending activity. All accounts included in the composite follow a similar investment philosophy. This composite may include accounts with multiple investor types which can have different withholding tax rates applied. BlackRock also maintains an institutional fund composite for this strategy. The creation date of the composite is 1 November 2010. The composite does not have a Significant Cash Flow Policy.

Performance presented for periods prior to 1 December 2009 occurred while members of the portfolio management team were affiliated with Barclays Global Investors ("Prior Firm"). Such members of the portfolio management team were responsible for investment management decisions for the S&P 500 Index Separate Account Composite (Americas) at the Prior Firm and the decision making process has remained intact and independent within BlackRock. The performance presented is for those portfolios that were brought over to BlackRock from the Prior Firm. In BlackRock management's opinion, such performance track record conforms to the GIPS standards with regard to the portability of investment results, and, as such, all historical performance results from the Prior Firm have been linked to the on-going performance results of the composite. Performance records of the Prior Firm are available upon request.

Historical data

BlackRock Bloomberg Barclays Treasury Inflation Protection Index Composite (Lending)

Calendar year	Gross of fee composite return (%)	Net of fee composite return (%)	Benchmark return (%)	Number of portfolios	Composite dispersion (%)	Composite 3 yr annualized standard deviation (%)	Benchmark 3 yr annualized standard deviation (%)	Total assets at end of period (USD millions)	Percentage of firm assets
2009	11.37	11.31	11.41	2	0.01	8.67	8.72	3,463	<1
2010	6.38	6.33	6.31	2	0.03	8.68	8.74	5,177	<1
2011	13.69	13.63	13.56	2	0.01	5.71	5.75	6,855	<1
2012	7.07	7.02	6.98	2	0.00	4.33	4.34	7,024	<1
2013	-8.54	-8.68	-8.61	2	0.01	5.35	5.36	5,871	<1
2014	3.62	3.57	3.64	2	0.02	5.17	5.15	6,170	<1
2015	-1.23	-1.28	-1.44	2	0.01	5.04	5.00	6,755	<1
2016	4.85	4.81	4.68	2	0.01	4.15	4.08	7,086	<1
2017	3.24	3.19	3.01	2	0.00	3.50	3.46	10,153	<1
2018	-1.13	-1.16	-1.26	2	0.00	3.06	3.05	12,102	<1

The figures shown relate to past performance. Past Performance is not a reliable indicator of future results and should not be the sole factor of consideration when selecting a product or strategy.

Please see the following page for important disclosures related to this composite.

* Performance results presented for periods prior to 1 December 2009 occurred while members of the portfolio management team were affiliated with another firm ("Prior Firm"). Such members of the portfolio management team were responsible for investment decisions at the Prior Firm and the decision making process has remained intact and independent within BlackRock. See Note 10 on the following page.

Data shown may be subject to revisions from time to time based on availability of new information. Any such revisions are not material.

Historical data

BlackRock Bloomberg Barclays Treasury Inflation Protection Index Composite (Lending)

Notes

1. For purposes of compliance with the Global Investment Performance Standards (GIPS®), the "firm" refers to the investment adviser and national trust bank subsidiaries of BlackRock, Inc., located globally. This definition excludes: i) BlackRock subsidiaries that do not provide investment advisory or management services, ii) the Absolute Return Strategies (funds-of-hedge-funds) business unit under the "BlackRock Alternative Advisers" platform, iii) BlackRock Capital Investment Corporation, LLC, iv) FutureAdvisor, Inc., and v) Retail mutual funds and separately managed accounts within BlackRock México Operadora, S.A. de C.V., Sociedad Operadora de Fondos de Inversión.
2. BlackRock claims compliance with the GIPS standards and has prepared and presented this report in compliance with the GIPS standards. BlackRock has been independently verified for the periods 1 January 1993 through 31 December 2017. The verification reports are available upon request. Verification assesses whether (1) the firm has complied with all the composite construction requirements of the GIPS standards on a firm-wide basis and (2) the firm's policies and procedures are designed to calculate and present performance in compliance with the GIPS standards. Verification does not ensure the accuracy of any specific composite presentation. The firm is verified annually by Deloitte & Touche LLP.
3. BlackRock uses a time-weighted linked rate of return formula with adjustments for cash flows to calculate rates of return. Trade date accounting has been used since the inception of the composite. The currency used to calculate performance is US dollars.
4. The benchmark index shown is the Bloomberg Barclays Treasury Inflation Protection Index Total Return®.
5. Composite dispersion measures represent the consistency of a firm's composite performance results with respect to the individual portfolio returns within a composite. Dispersion is represented by the asset-weighted standard deviation of only portfolios that have been included in the composite style for a full year. For composites containing only one account, a measure of dispersion is not meaningful (NM).
6. Percentage of Firm Assets are rounded to the nearest whole percent.
7. There have been no alterations of the composite due to changes in personnel or other reasons.
8. Derivatives, shorting and leverage are not utilized in the portfolio.
9. Gross of fee performance results are presented before management and custodial fees and net of broker fees, transaction costs, and withholding taxes (if applicable). Certain portfolios may have custodial fees included. As of 1 January 2014, net performance reflects the deduction of the highest management fee per the strategy fee schedule. Prior to this date, net performance reflected the deduction of the highest management fee that could have been charged to any account in the composite. The standard management fee schedule for this strategy for institutional separate accounts is as follows: first \$100 million of assets, 0.04 of 1%; next \$400 million of assets, 0.02 of 1%; remaining assets in excess of \$500 million, 0.01 of 1%.
10. A complete list and description of all composites maintained by BlackRock and the related performance results are available upon request. Additional information regarding policies for calculating and reporting returns as well as valuation policies is also available upon request.

The **BlackRock Bloomberg Barclays Treasury Inflation Protection Index Composite (Lending)** is comprised of all fully discretionary, total return institutional fixed income funds, which are passively managed to track the performance of the Bloomberg Barclays Treasury Inflation Protection Index Total Return®. Accounts in this composite are engaged in securities lending activity. All accounts included in the composite follow a similar investment philosophy. This composite may include accounts with multiple investor types which can have different withholding tax rates applied. The creation date of the composite is 1 November 2010. The composite does not have a Significant Cash Flow Policy.

Performance presented for periods prior to 1 December 2009 occurred while members of the portfolio management team were affiliated with Barclays Global Investors ("Prior Firm"). Such members of the portfolio management team were responsible for investment management decisions for the Bloomberg Barclays Treasury Inflation Protection Index Composite (Lending) at the Prior Firm and the decision making process has remained intact and independent within BlackRock. The performance presented is for those portfolios that were brought over to BlackRock from the Prior Firm. In BlackRock management's opinion, such performance track record conforms to the GIPS standards with regard to the portability of investment results, and, as such, all historical performance results from the Prior Firm have been linked to the on-going performance results of the composite. Performance records of the Prior Firm are available upon request.

Historical data

BlackRock Bloomberg Barclays Treasury Inflation Protection Index Separate Account Composite

Calendar year	Gross of fee composite return (%)	Net of fee composite return (%)	Benchmark return (%)	Number of portfolios	Composite dispersion (%)	Composite 3 yr annualized standard deviation (%)	Benchmark 3 yr annualized standard deviation (%)	Total assets at end of period (USD millions)	Percentage of firm assets
2009	11.49	11.39	11.41	1	NM	8.67	8.72	447	<1
2010	6.31	6.22	6.31	2	NM	8.67	8.74	2,796	<1
2011	13.60	13.49	13.56	2	0.00	5.74	5.75	2,923	<1
2012	6.98	6.88	6.98	2	0.00	4.35	4.34	2,849	<1
2013	-8.61	-8.69	-8.61	2	0.00	5.35	5.36	2,300	<1
2014	3.66	3.58	3.64	2	0.01	5.14	5.15	2,284	<1
2015	-1.44	-1.49	-1.44	2	0.01	4.99	5.00	1,730	<1
2016	4.75	4.70	4.68	1	NM	4.08	4.08	612	<1
2017	3.07	3.02	3.01	1	NM	3.46	3.46	2,103	<1
2018	-1.29	-1.34	-1.26	1	NM	3.06	3.05	2,150	<1

The figures shown relate to past performance. Past Performance is not a reliable indicator of future results and should not be the sole factor of consideration when selecting a product or strategy.

Please see the following page for important disclosures related to this composite.

* Performance results presented for periods prior to 1 December 2009 occurred while members of the portfolio management team were affiliated with another firm ("Prior Firm"). Such members of the portfolio management team were responsible for investment decisions at the Prior Firm and the decision making process has remained intact and independent within BlackRock. See Note 10 on the following page.

Data shown may be subject to revisions from time to time based on availability of new information. Any such revisions are not material.

Historical data

BlackRock Bloomberg Barclays Treasury Inflation Protection Index Separate Account Composite

Notes

1. For purposes of compliance with the Global Investment Performance Standards (GIPS®), the "firm" refers to the investment adviser and national trust bank subsidiaries of BlackRock, Inc., located globally. This definition excludes: i) BlackRock subsidiaries that do not provide investment advisory or management services, ii) the Absolute Return Strategies (funds-of-hedge-funds) business unit under the "BlackRock Alternative Advisers" platform, iii) BlackRock Capital Investment Corporation, LLC, iv) FutureAdvisor, Inc., and v) Retail mutual funds and separately managed accounts within BlackRock México Operadora, S.A. de C.V., Sociedad Operadora de Fondos de Inversión.
2. BlackRock claims compliance with the GIPS standards and has prepared and presented this report in compliance with the GIPS standards. BlackRock has been independently verified for the periods 1 January 1993 through 31 December 2017. The verification reports are available upon request. Verification assesses whether (1) the firm has complied with all the composite construction requirements of the GIPS standards on a firm-wide basis and (2) the firm's policies and procedures are designed to calculate and present performance in compliance with the GIPS standards. Verification does not ensure the accuracy of any specific composite presentation. The firm is verified annually by Deloitte & Touche LLP.
3. BlackRock uses a time-weighted linked rate of return formula with adjustments for cash flows to calculate rates of return. Trade date accounting has been used since the inception of the composite. The currency used to calculate performance is US dollars.
4. The benchmark index shown is the Bloomberg Barclays Treasury Inflation Protection Index Total Return®.
5. Composite dispersion measures represent the consistency of a firm's composite performance results with respect to the individual portfolio returns within a composite. Dispersion is represented by the asset-weighted standard deviation of only portfolios that have been included in the composite style for a full year. For composites containing only one account, a measure of dispersion is not meaningful (NM).
6. Percentage of Firm Assets are rounded to the nearest whole percent.
7. There have been no alterations of the composite due to changes in personnel or other reasons.
8. Derivatives, shorting and leverage are not utilized in the portfolio.
9. Gross of fee performance results are presented before management and custodial fees and net of broker fees, transaction costs, and withholding taxes (if applicable). Certain portfolios may have custodial fees included. As of 1 January 2014, net performance reflects the deduction of the highest management fee per the strategy fee schedule. Prior to this date, net performance reflected the deduction of the highest management fee that could have been charged to any account in the composite. The standard management fee schedule for this strategy for institutional separate accounts is as follows: first \$100 million of assets, 0.05 of 1%; next \$400 million of assets, 0.03 of 1%; remaining assets in excess of \$500 million, 0.02 of 1%.
10. A complete list and description of all composites maintained by BlackRock and the related performance results are available upon request. Additional information regarding policies for calculating and reporting returns as well as valuation policies is also available upon request.

The **BlackRock Bloomberg Barclays Treasury Inflation Protection Index Separate Account Composite** is comprised of all fully discretionary, total return separate account fixed income portfolios, which are passively managed to track the performance of the Bloomberg Barclays Treasury Inflation Protection Index Total Return®. Accounts in this composite may engage in securities lending activity under the direction of the client via third parties while other clients may choose not to engage in stock lending. Performance shown above reflects any stock lending activity. All accounts included in the composite follow a similar investment philosophy. This composite may include accounts with multiple investor types which can have different withholding tax rates applied. BlackRock also maintains an institutional fund composite for this strategy. The creation date of the composite is 1 November 2010. The composite does not have a Significant Cash Flow Policy.

Performance presented for periods prior to 1 December 2009 occurred while members of the portfolio management team were affiliated with Barclays Global Investors ("Prior Firm"). Such members of the portfolio management team were responsible for investment management decisions for the Bloomberg Barclays Treasury Inflation Protection Index Separate Account Composite at the Prior Firm and the decision making process has remained intact and independent within BlackRock. The performance presented is for those portfolios that were brought over to BlackRock from the Prior Firm. In BlackRock management's opinion, such performance track record conforms to the GIPS standards with regard to the portability of investment results, and, as such, all historical performance results from the Prior Firm have been linked to the on-going performance results of the composite. Performance records of the Prior Firm are available upon request.

Historical data

BlackRock Bloomberg Barclays US High Yield 500MM 2% Issuer Cap Index

Calendar year	Gross of fee composite return (%)	Net of fee composite return (%)	Benchmark return (%)	Number of portfolios	Composite dispersion (%)	Composite 3 yr annualized standard deviation (%)**	Benchmark 3 yr annualized standard deviation (%)**	Total assets at end of period (USD millions)	Percentage of firm assets
01/04/10 - 31/12/10	9.97	9.79	9.91	1	NM	N/A	N/A	272	<1
2011	5.18	4.95	5.39	1	NM	N/A	N/A	241	<1
2012	15.72	15.46	15.68	1	NM	N/A	N/A	206	<1
2013	6.75	6.51	6.82	1	NM	7.30	7.33	130	<1
2014	3.07	2.83	2.76	1	NM	4.96	4.94	197	<1
2015	-4.63	-4.84	-4.70	1	NM	5.67	5.63	312	<1
2016	16.59	16.29	16.76	2	NM	6.16	6.18	550	<1
2017	7.33	7.12	7.22	2	0.02	5.62	5.66	546	<1
2018	-2.29	-2.48	-2.17	1	NM	4.51	4.55	237	<1

The figures shown relate to past performance. Past Performance is not a reliable indicator of future results and should not be the sole factor of consideration when selecting a product or strategy.

Please see the following page for important disclosures related to this composite.

* Data shown may be subject to revisions from time to time based on availability of new information. Any such revisions are not material.

** N/A – 36 months of data is not available for that period.

Historical data

BlackRock Bloomberg Barclays US High Yield 500MM 2% Issuer Cap Index Composite (Non-Lending)

Notes

1. For purposes of compliance with the Global Investment Performance Standards (GIPS®), the "firm" refers to the investment adviser and national trust bank subsidiaries of BlackRock, Inc., located globally. This definition excludes: i) BlackRock subsidiaries that do not provide investment advisory or management services, ii) the Absolute Return Strategies (funds-of-hedge-funds) business unit under the "BlackRock Alternative Advisers" platform, iii) BlackRock Capital Investment Corporation, LLC, iv) FutureAdvisor, Inc., and v) Retail mutual funds and separately managed accounts within BlackRock México Operadora, S.A. de C.V., Sociedad Operadora de Fondos de Inversión.
2. BlackRock claims compliance with the GIPS standards and has prepared and presented this report in compliance with the GIPS standards. BlackRock has been independently verified for the periods 1 January 1993 through 31 December 2017. The verification reports are available upon request. Verification assesses whether (1) the firm has complied with all the composite construction requirements of the GIPS standards on a firm-wide basis and (2) the firm's policies and procedures are designed to calculate and present performance in compliance with the GIPS standards. Verification does not ensure the accuracy of any specific composite presentation. The firm is verified annually by Deloitte & Touche LLP.
3. BlackRock uses a time-weighted linked rate of return formula with adjustments for cash flows to calculate rates of return. Trade date accounting has been used since the inception of the composite. The currency used to calculate performance is US dollars.
4. The benchmark index shown is the Bloomberg Barclays US High Yield 500MM 2% Issuer Cap Index Total Return*.
5. Composite dispersion measures represent the consistency of a firm's composite performance results with respect to the individual portfolio returns within a composite. Dispersion is represented by the asset-weighted standard deviation of only portfolios that have been included in the composite style for a full year. For composites containing only one account, a measure of dispersion is not meaningful (NM).
6. Percentage of Firm Assets are rounded to the nearest whole percent.
7. There have been no alterations of the composite due to changes in personnel or other reasons.
8. Derivatives, shorting and leverage are not utilized in the portfolio.
9. Gross of fee performance results are presented before management and custodial fees and net of broker fees, transaction costs, and withholding taxes (if applicable). Certain portfolios may have custodial fees included. As of 1 January 2014, net performance reflects the deduction of the highest management fee per the strategy fee schedule. Prior to this date, net performance reflected the deduction of the highest management fee that could have been charged to any account in the composite. The standard management fee schedule for this strategy for institutional separate accounts is as follows: first \$100 million of assets, 0.20 of 1%; next \$400 million of assets, 0.18 of 1%; remaining assets in excess of \$500 million, 0.16 of 1%.
10. A complete list and description of all composites maintained by BlackRock and the related performance results are available upon request. Additional information regarding policies for calculating and reporting returns as well as valuation policies is also available upon request.

The **BlackRock Bloomberg Barclays US High Yield 500MM 2% Issuer Cap Index Composite (Non-Lending)** is comprised of all fully discretionary, total return institutional fixed income funds, which are passively managed to track the performance of the Bloomberg Barclays US High Yield 500MM 2% Issuer Cap Index Total Return*. All accounts included in the composite follow a similar investment philosophy. This composite may include accounts with multiple investor types which can have different withholding tax rates applied. The creation date of the composite is 1 November 2010. The composite does not have a Significant Cash Flow Policy.

Historical data

BlackRock JP Morgan Emerging Markets Local Currency Index Composite (Non-Lending)

Calendar year	Gross of fee composite return (%)	Net of fee composite return (%)	Benchmark return (%)	Number of portfolios	Composite dispersion (%)	Composite 3 yr annualized standard deviation (%)**	Benchmark 3 yr annualized standard deviation (%)**	Total assets at end of period (USD millions)	Percentage of firm assets
2011	-2.85	-3.21	-1.75	1	NM	N/A	N/A	157	<1
2012	15.89	15.46	16.76	1	NM	N/A	N/A	131	<1
2013	-9.82	-10.15	-8.98	1	NM	12.78	12.61	169	<1
2014	-6.02	-6.35	-5.72	1	NM	11.69	11.77	98	<1
2015	-15.38	-15.64	-14.92	1	NM	10.31	10.35	85	<1
2016	9.24	8.96	9.94	1	NM	11.93	11.97	95	<1
2017	14.51	14.21	15.21	1	NM	10.82	10.87	108	<1
2018	-6.67	-6.91	-6.21	1	NM	11.07	11.09	164	<1

The figures shown relate to past performance. Past Performance is not a reliable indicator of future results and should not be the sole factor of consideration when selecting a product or strategy.

Please see the following page for important disclosures related to this composite.

* Data shown may be subject to revisions from time to time based on availability of new information. Any such revisions are not material.

** N/A – 36 months of data is not available for that period.

Historical data

BlackRock JP Morgan Emerging Markets Local Currency Index Composite (Non-Lending)

Notes

1. For purposes of compliance with the Global Investment Performance Standards (GIPS®), the "firm" refers to the investment adviser and national trust bank subsidiaries of BlackRock, Inc., located globally. This definition excludes: i) BlackRock subsidiaries that do not provide investment advisory or management services, ii) the Absolute Return Strategies (funds-of-hedge-funds) business unit under the "BlackRock Alternative Advisers" platform, iii) BlackRock Capital Investment Corporation, LLC, iv) FutureAdvisor, Inc., and v) Retail mutual funds and separately managed accounts within BlackRock México Operadora, S.A. de C.V., Sociedad Operadora de Fondos de Inversión.
2. BlackRock claims compliance with the GIPS standards and has prepared and presented this report in compliance with the GIPS standards. BlackRock has been independently verified for the periods 1 January 1993 through 31 December 2017. The verification reports are available upon request. Verification assesses whether (1) the firm has complied with all the composite construction requirements of the GIPS standards on a firm-wide basis and (2) the firm's policies and procedures are designed to calculate and present performance in compliance with the GIPS standards. Verification does not ensure the accuracy of any specific composite presentation. The firm is verified annually by Deloitte & Touche LLP.
3. BlackRock uses a time-weighted linked rate of return formula with adjustments for cash flows to calculate rates of return. Trade date accounting has been used since the inception of the composite. The currency used to calculate performance is US dollars.
4. The benchmark index shown is the JP Morgan GBI-EM Global Diversified Index®.
5. Composite dispersion measures represent the consistency of a firm's composite performance results with respect to the individual portfolio returns within a composite. Dispersion is represented by the asset-weighted standard deviation of only portfolios that have been included in the composite style for a full year. For composites containing only one account, a measure of dispersion is not meaningful (NM).
6. Percentage of Firm Assets are rounded to the nearest whole percent.
7. There have been no alterations of the composite due to changes in personnel or other reasons.
8. Derivatives, shorting and leverage are not utilized in the portfolio.
9. Gross of fee performance results are presented before management and custodial fees and net of broker fees, transaction costs, and withholding taxes (if applicable). Certain portfolios may have custodial fees included. As of 1 January 2014, net performance reflects the deduction of the highest management fee per the strategy fee schedule. Prior to this date, net performance reflected the deduction of the highest management fee that could have been charged to any account in the composite. The standard management fee schedule for this strategy for institutional separate accounts is as follows: first \$100 million of assets, 0.26 of 1%; next \$400 million of assets, 0.24 of 1%; remaining assets in excess of \$500 million, 0.22 of 1%.
10. A complete list and description of all composites maintained by BlackRock and the related performance results are available upon request. Additional information regarding policies for calculating and reporting returns as well as valuation policies is also available upon request.

The **BlackRock JP Morgan Emerging Market Local Currency Index Composite (Non-Lending)** is comprised of all fully discretionary, total return institutional fixed income funds, which are passively managed to track the performance of the JP Morgan GBI-EM Global Diversified Index®. All accounts included in the composite follow a similar investment philosophy. This composite may include accounts with multiple investor types which can have different withholding tax rates applied. The creation date of the composite is 1 January 2011. The composite does not have a Significant Cash Flow Policy. As of 31 December 2012, the JP Morgan GBI-EM Global Diversified Index (Non-Lend) Composite has been renamed the JP Morgan Emerging Market Local Currency Index (Non-Lend) Composite.

Historical data

BlackRock JP Morgan Emerging Markets Bond Index Global Diversified Separate Account Composite

Calendar year	Gross of fee composite return (%)	Net of fee composite return (%)	Benchmark return (%)	Number of portfolios	Composite dispersion (%)	Composite 3 yr annualized standard deviation (%)**	Benchmark 3 yr annualized standard deviation (%)**	Total assets at end of period (USD millions)	Percentage of firm assets
01/10/16 - 31/12/16	-4.13	-4.18	-4.02	1	NM	N/A	N/A	1,329	<1
2017	10.09	9.85	10.26	2	NM	N/A	N/A	1,761	<1
2018	-4.18	-4.39	-4.26	2	0.03	N/A	N/A	1,724	<1

The figures shown relate to past performance. Past Performance is not a reliable indicator of future results and should not be the sole factor of consideration when selecting a product or strategy.

Please see the following page for important disclosures related to this composite.

* Data shown may be subject to revisions from time to time based on availability of new information. Any such revisions are not material.

** N/A – 36 months of data is not available for that period.

Historical data

BlackRock JP Morgan Emerging Markets Bond Index Global Diversified Separate Account Composite

Notes

1. For purposes of compliance with the Global Investment Performance Standards (GIPS®), the "firm" refers to the investment adviser and national trust bank subsidiaries of BlackRock, Inc., located globally. This definition excludes: i) BlackRock subsidiaries that do not provide investment advisory or management services, ii) the Absolute Return Strategies (funds-of-hedge-funds) business unit under the "BlackRock Alternative Advisers" platform, iii) BlackRock Capital Investment Corporation, LLC, iv) FutureAdvisor, Inc., and v) Retail mutual funds and separately managed accounts within BlackRock México Operadora, S.A. de C.V., Sociedad Operadora de Fondos de Inversión.
2. BlackRock claims compliance with the GIPS standards and has prepared and presented this report in compliance with the GIPS standards. BlackRock has been independently verified for the periods 1 January 1993 through 31 December 2017. The verification reports are available upon request. Verification assesses whether (1) the firm has complied with all the composite construction requirements of the GIPS standards on a firm-wide basis and (2) the firm's policies and procedures are designed to calculate and present performance in compliance with the GIPS standards. Verification does not ensure the accuracy of any specific composite presentation. The firm is verified annually by Deloitte & Touche LLP.
3. BlackRock uses a time-weighted linked rate of return formula with adjustments for cash flows to calculate rates of return. Trade date accounting has been used since the inception of the composite. The currency used to calculate performance is US dollars.
4. The benchmark index shown is the JP Morgan Emerging Markets Bond Index Global Diversified.
5. Composite dispersion measures represent the consistency of a firm's composite performance results with respect to the individual portfolio returns within a composite. Dispersion is represented by the asset-weighted standard deviation of only portfolios that have been included in the composite style for a full year. For composites containing only one account, a measure of dispersion is not meaningful (NM).
6. Percentage of Firm Assets are rounded to the nearest whole percent.
7. There have been no alterations of the composite due to changes in personnel or other reasons.
8. Derivatives, shorting and leverage are not utilized in the portfolio.
9. Gross of fee performance results are presented before management and custodial fees and net of broker fees, transaction costs, and withholding taxes (if applicable). Certain portfolios may have custodial fees included. Net performance reflects the deduction of the highest management fee per the strategy fee schedule. The standard management fee schedule for this strategy for institutional separate accounts is as follows: first \$100 million of assets, 0.22 of 1%; next \$400 million of assets, 0.20 of 1%; remaining assets in excess of \$500 million, 0.18 of 1%.
10. A complete list and description of all composites maintained by BlackRock and the related performance results are available upon request. Additional information regarding policies for calculating and reporting returns as well as valuation policies is also available upon request.

The **BlackRock JP Morgan Emerging Markets Bond Index Global Diversified Separate Account Composite** is comprised of all fully discretionary, total return separate account fixed income portfolios, which are passively managed to track the performance of the JP Morgan Emerging Markets Bond Index Global Diversified. Accounts in this composite may engage in securities lending activity under the direction of the client via third parties while other clients may choose not to engage in stock lending. Performance shown above reflects any stock lending activity. All accounts included in the composite follow a similar investment philosophy. This composite may include accounts with multiple investor types which can have different withholding tax rates applied. BlackRock also maintains an institutional fund composite for this strategy. The creation date of the composite is 25 October 2016. The composite does not have a Significant Cash Flow Policy.

Historical data

BlackRock Bloomberg Barclays Aggregate Bond Index Composite (Lending)

Calendar year	Gross of fee composite return (%)	Net of fee composite return (%)	Benchmark return (%)	Number of portfolios	Composite dispersion (%)	Composite 3 yr annualized standard deviation (%)	Benchmark 3 yr annualized standard deviation (%)	Total assets at end of period (USD millions)	Percentage of firm assets
2009	6.01	5.85	5.93	2	0.01	4.13	4.11	32,364	<1
2010	6.73	6.57	6.54	2	0.00	4.18	4.17	37,485	1
2011	7.89	7.73	7.84	3	0.01	2.76	2.78	44,633	1
2012	4.32	4.11	4.21	3	0.01	2.37	2.38	54,367	1
2013	-1.93	-2.23	-2.02	3	0.01	2.70	2.71	27,006	<1
2014	6.24	6.15	5.97	3	0.00	2.63	2.63	27,955	<1
2015	0.63	0.55	0.55	3	0.01	2.87	2.88	31,066	<1
2016	2.75	2.69	2.65	3	0.01	2.98	2.98	37,079	<1
2017	3.68	3.63	3.54	3	0.00	2.78	2.78	46,900	<1
2018	0.07	0.02	0.01	3	0.01	2.85	2.84	54,978	<1

The figures shown relate to past performance. Past Performance is not a reliable indicator of future results and should not be the sole factor of consideration when selecting a product or strategy.

Please see the following page for important disclosures related to this composite.

* Performance results presented for periods prior to 1 December 2009 occurred while members of the portfolio management team were affiliated with another firm ("Prior Firm"). Such members of the portfolio management team were responsible for investment decisions at the Prior Firm and the decision making process has remained intact and independent within BlackRock. See Note 10 on the following page.

Data shown may be subject to revisions from time to time based on availability of new information. Any such revisions are not material.

Historical data

BlackRock Bloomberg Barclays Aggregate Bond Index Composite (Lending)

Notes

1. For purposes of compliance with the Global Investment Performance Standards (GIPS®), the "firm" refers to the investment adviser and national trust bank subsidiaries of BlackRock, Inc., located globally. This definition excludes: i) BlackRock subsidiaries that do not provide investment advisory or management services, ii) the Absolute Return Strategies (funds-of-hedge-funds) business unit under the "BlackRock Alternative Advisers" platform, iii) BlackRock Capital Investment Corporation, LLC, iv) FutureAdvisor, Inc., and v) Retail mutual funds and separately managed accounts within BlackRock México Operadora, S.A. de C.V., Sociedad Operadora de Fondos de Inversión.
2. BlackRock claims compliance with the GIPS standards and has prepared and presented this report in compliance with the GIPS standards. BlackRock has been independently verified for the periods 1 January 1993 through 31 December 2017. The verification reports are available upon request. Verification assesses whether (1) the firm has complied with all the composite construction requirements of the GIPS standards on a firm-wide basis and (2) the firm's policies and procedures are designed to calculate and present performance in compliance with the GIPS standards. Verification does not ensure the accuracy of any specific composite presentation. The firm is verified annually by Deloitte & Touche LLP.
3. BlackRock uses a time-weighted linked rate of return formula with adjustments for cash flows to calculate rates of return. Trade date accounting has been used since the inception of the composite. The currency used to calculate performance is US dollars.
4. The benchmark index shown is the Bloomberg Barclays Aggregate Bond Index Total Return®.
5. Composite dispersion measures represent the consistency of a firm's composite performance results with respect to the individual portfolio returns within a composite. Dispersion is represented by the asset-weighted standard deviation of only portfolios that have been included in the composite style for a full year. For composites containing only one account, a measure of dispersion is not meaningful (NM).
6. Percentage of Firm Assets are rounded to the nearest whole percent.
7. There have been no alterations of the composite due to changes in personnel or other reasons.
8. Derivatives, shorting and leverage are not utilized in the portfolio.
9. Gross of fee performance results are presented before management and custodial fees and net of broker fees, transaction costs, and withholding taxes (if applicable). Certain portfolios may have custodial fees included. As of 1 January 2014, net performance reflects the deduction of the highest management fee per the strategy fee schedule. Prior to this date, net performance reflected the deduction of the highest management fee that could have been charged to any account in the composite. The standard management fee schedule for this strategy for institutional separate accounts is as follows: first \$100 million of assets, 0.05 of 1%; next \$400 million of assets, 0.04 of 1%; remaining assets in excess of \$500 million, 0.02 of 1%.
10. A complete list and description of all composites maintained by BlackRock and the related performance results are available upon request. Additional information regarding policies for calculating and reporting returns as well as valuation policies is also available upon request.

The **BlackRock Bloomberg Barclays Aggregate Bond Index Composite (Lending)** is comprised of all fully discretionary, total return institutional fixed income funds, which are passively managed to track the performance of the Bloomberg Barclays Aggregate Bond Index Total Return®. Accounts in this composite are engaged in securities lending activity. All accounts included in the composite follow a similar investment philosophy. This composite may include accounts with multiple investor types which can have different withholding tax rates applied. This composite may include accounts with multiple investor types which can have different withholding tax rates applied. The creation date of the composite is 1 November 2010. The composite does not have a Significant Cash Flow Policy.

Performance presented for periods prior to 1 December 2009 occurred while members of the portfolio management team were affiliated with Barclays Global Investors ("Prior Firm"). Such members of the portfolio management team were responsible for investment management decisions for the Bloomberg Barclays Aggregate Bond Index Composite (Lending) at the Prior Firm and the decision making process has remained intact and independent within BlackRock. The performance presented is for those portfolios that were brought over to BlackRock from the Prior Firm. In BlackRock management's opinion, such performance track record conforms to the GIPS standards with regard to the portability of investment results, and, as such, all historical performance results from the Prior Firm have been linked to the on-going performance results of the composite. Performance records of the Prior Firm are available upon request.