Tucson Supplemental Retirement System

Portfolio Review

July 31, 2014

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I. BlackRock Overview

BlackRock at a glance

BlackRock Mission Statement

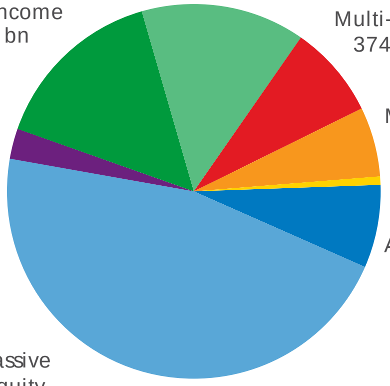
Create a better financial future for our clients by building the most respected investment and risk manager in the world

BlackRock facts*

- Established in 1988
- NYSE: BLK
- $4.59 trillion assets under management
- More than 11,000 employees
- More than 1,900 investment professionals
- More than 65 offices in over 30 countries
- 29 primary investment centers*
- Clients in over 100 countries
- Over 700 iShares® ETFs
- BlackRock Solutions® manages over $15 trillion in assets
- Financial Markets Advisory business managed or advised on over $8 trillion in asset and derivative portfolios
- Transition Management team partners with clients to save costs and reduce risks when changing investment exposures

* As of 31 March 2014

$4.59 trillion managed across asset classes



Assets as of 30 June 2014

[1] Includes commodity and currency mandates

II. Account Update

Summary

As of June 30, 2014	Investment Value $
Russell 1000 Value Fund	79,520,136
US Debt Index Fund	60,280,226
Total	**139,800,362**

III. Equity Index Strategies Overview & Performance

BlackRock's Beta Strategies Platform

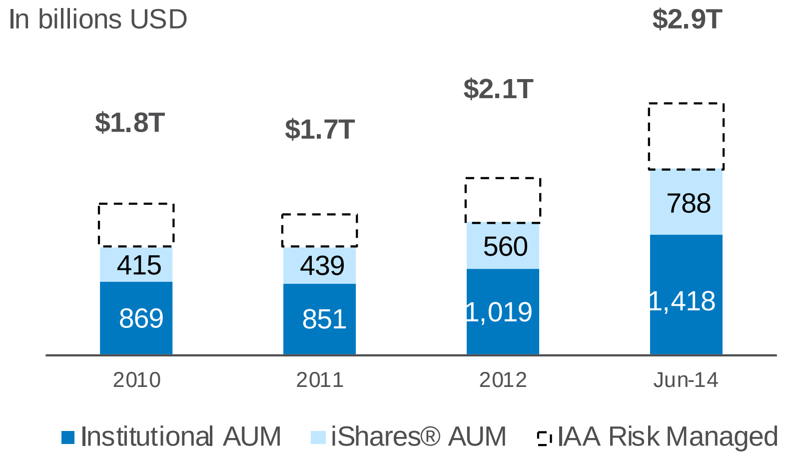
Global leader in Index Equity assets[1]

- We seek to deliver consistent performance with precise and reliable outcomes for our clients
- Thousands of skillful and thoughtful decisions made each year for swift response to market trends and client demands

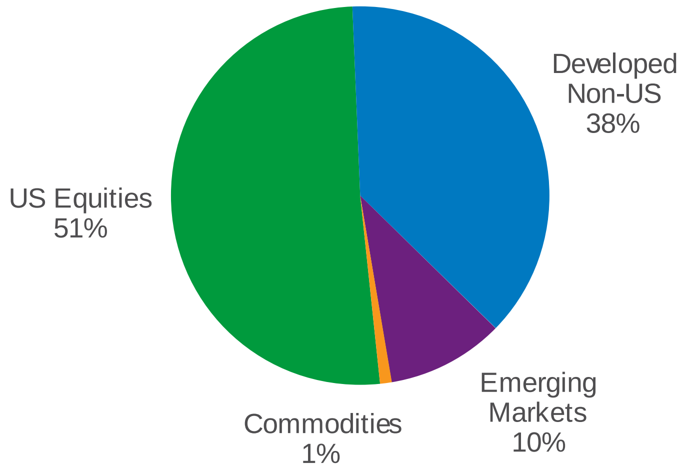
Extensive and flexible platform for beta strategies

- Over 2,000 funds managed against 650+ benchmarks
- Daily liquidity with T-1 notification (for US equities) and T-2 notification (for non US equities)[2]
- Modular fund structure and asset allocation platform facilitates custom and outcome oriented solutions

Total Beta Strategies risk managed assets of $2.9 trillion USD



Distribution of assets by region of mandate



Source: BlackRock, Inc. and its affiliates (together "BlackRock") as of 30 June 2014
[1] In terms of AUM. Source: Pensions & Investments
[2] Frontier markets commingled fund currently open bi-monthly

Beta strategies continue to be a growing portion of client portfolios

Investors today are enhancing their passive allocations in three ways:

Comprehensive core

- Migrating to broader mandates — segregated index mandates are re-aggregated into one
- Going global — ACWI / ACWI IMI is the fastest growing index strategy
- Moving EM into mainstream — no longer niche; gain EM exposure via global indices

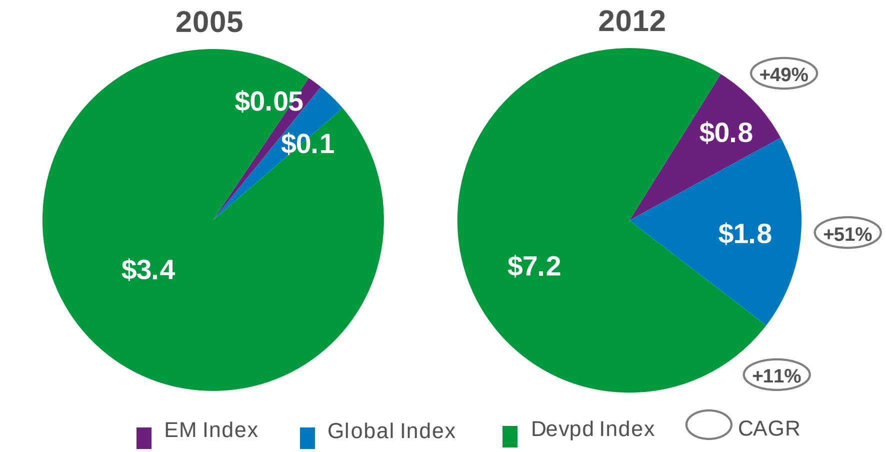
Complementary styles

- Introducing strategic beta as complement to traditional market cap indices
  - Minimum volatility
  - Fundamentally-weighted
  - Factor-based
  - Economic exposure

Custom synthetic overlays

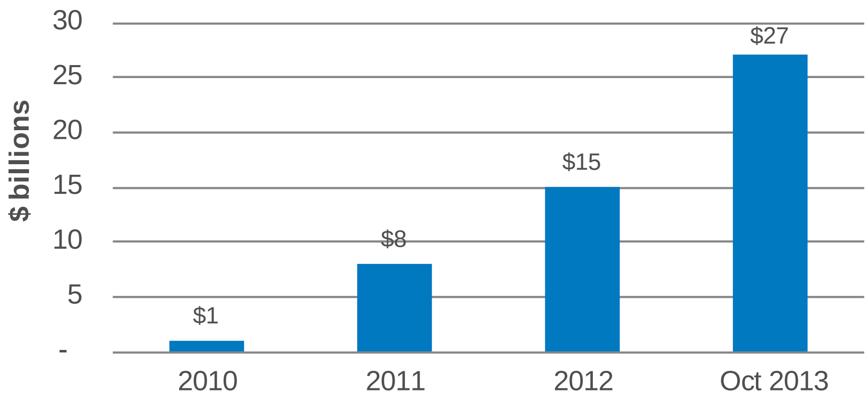
- Implementing synthetic passive exposure over an alpha strategy
- Creating capital efficient, liquid, rebalancing strategies
- Expressing tactical asset allocation views through synthetic beta

Rising demand for global & EM index strategies ($ trillions)



Source: Boston Consulting Group, Strategic Insight, eVestment Alliance, BLK Corporate Strategy estimates
AUM figures represent industry AUM in $ trillions (excl. MMFs & Inst'l Alts)

Growth in strategic beta over past 4 years



Source: BlackRock strategic beta (non-market cap weighted strategies) assets under management

Global Beta Strategies

Global Beta Strategies
Amy Schioldager

1 Executive Assistant

Office of the COO
Debbie Jelilian

Global Platform Officer, Global Business Manager (SF)

Investment Strategy
Corin Frost, CFA

11 Investment Strategists,
2 Administrative Assistants
(SF, NYC, LON, HKG)

Portfolio Management Americas
Alan Mason

59 Portfolio Managers,
4 Research Officers,
1 Executive Assistant
(SF, SAO)
9 Index Analysts
(SF, LON)

Portfolio Management EMEA
Eleanor de Freitas

33 Portfolio Managers
1 Administrative Assistant
(LON, MUN)

Portfolio Management APAC
Kevin Hardy

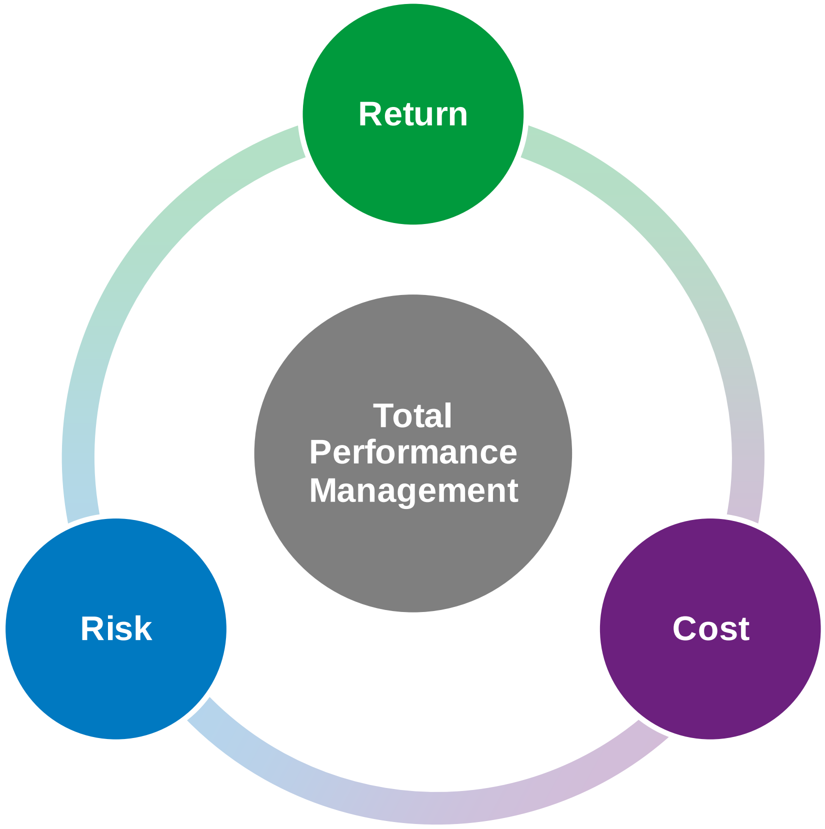
11 Portfolio Managers
1 Executive Assistant
(HKG, SNG, TOK)

Employees By Region	
Americas:	85
Europe:	42
Asia Pacific:	15
Total:	142

As of March 2014

Core investment philosophy of total performance management

We believe that superior investment outcomes are best achieved through a disciplined, objective process to manage return, risk and cost



Return

- Performance as planned with value-added portfolio management
- Flexible strategies and solutions

Risk

- Proprietary portfolio & risk management system helps manage investment and operational risk

Cost

- Trading cost integrated into portfolio construction using proprietary transaction cost models
- Transaction costs minimized through internal crossing network
- Focus on best execution for all external trading, including FX

Our index investment management process is anything but passive

Deep expertise and investment skill plays a significant role in delivering superior performance

- BlackRock beta portfolios are managed using a team approach to strategy, portfolio management, research, and trading

The ability to capture incremental gains on hundreds of investment decisions adds up over time

- Portfolio managers' decision-making process involves deciding on corporate actions such as dividends, stock splits, spinoffs, rights offerings, and mergers & acquisitions

Detail-intensive investment decisions provide unmatched performance, precision and reliability

Benchmark Knowledge

- Predict forthcoming index changes
- Audit daily updates from index providers
- Develop trade strategies to thoughtfully incorporate index events

Portfolio Construction

- Teams of portfolio managers dedicated by region
- Supported by leading technology and risk models
- Rapid dividend reinvestment and cash equitization

Efficient Trading

- Largest internal market place for crossing
- Best execution sough on all trades
- Direct FX in Emerging Markets
- Dedicated trading research team

Performance & Oversight

- Daily review by portfolio managers
- Monthly Investment Review Committee
- Independent Risk & Quantitative Analysis Group

Risk Management

Leverage independent RQA team and BlackRock's proprietary Aladdin® system to identify, monitor and minimize risk

Platform offerings: Equity 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 Dividend Aristocrats

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.	Peru	Thailand
Egypt	Philippines	Turkey
Greece	Poland	

BlackRock Frontier Markets Fund (countries included)

Argentina	Kazakhstan	Pakistan
Bahrain	Kenya	Qatar
Bangladesh	Kuwait	Romania
Botswana	Lebanon	Slovenia
Bulgaria	Lithuania	Sri Lanka
Croatia	Mauritius	Tunisia
Estonia	Morocco	UAE
Ghana	Nigeria	Vietnam
Jordan	Oman	

Frontier Markets ex-GCC Fund

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	ACWI ex-US IMI

Non-Lending Funds

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

Alternatives

US Commodity Funds

S&P GSCI Total Return Indexes
Dow Jones-UBS Total Return
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

Strategic Beta

Russell Defensive Indices
FTSE RAFI Indices
FTSE EDHEC Efficient US
MSCI Minimum Volatility Indices
Equal and GDP-Weighted Indices

ESG Thematic

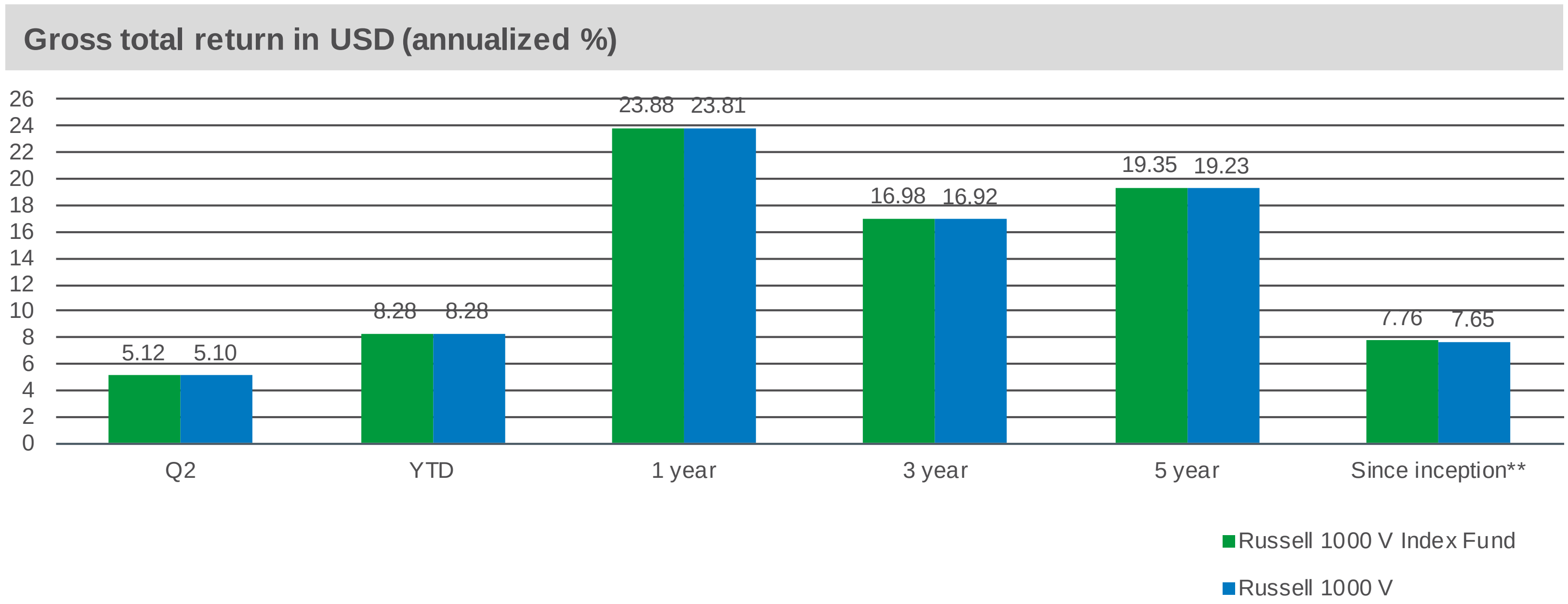
US Large Cap Carbon Efficient
MSCI Ex-Controversial Weapons

Custom Strategies available

As of 31 December 2013

Russell 1000 Value Index Fund Performance

As of 30 June 2014



	Q2* %	YTD* %	1-yr %	3-yr %	5-yr %	Since incept %
Tracking error (Gross vs. Benchmark)	0.02	0.00	0.07	0.06	0.12	0.11

* Unannualized

** Client inception date 11/30/01

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 II of BlackRock's Form ADV. Past results are not necessarily indicative of future results

Russell 1000® Value Index Fund Characteristics

As of 30 June 2014

Characteristics

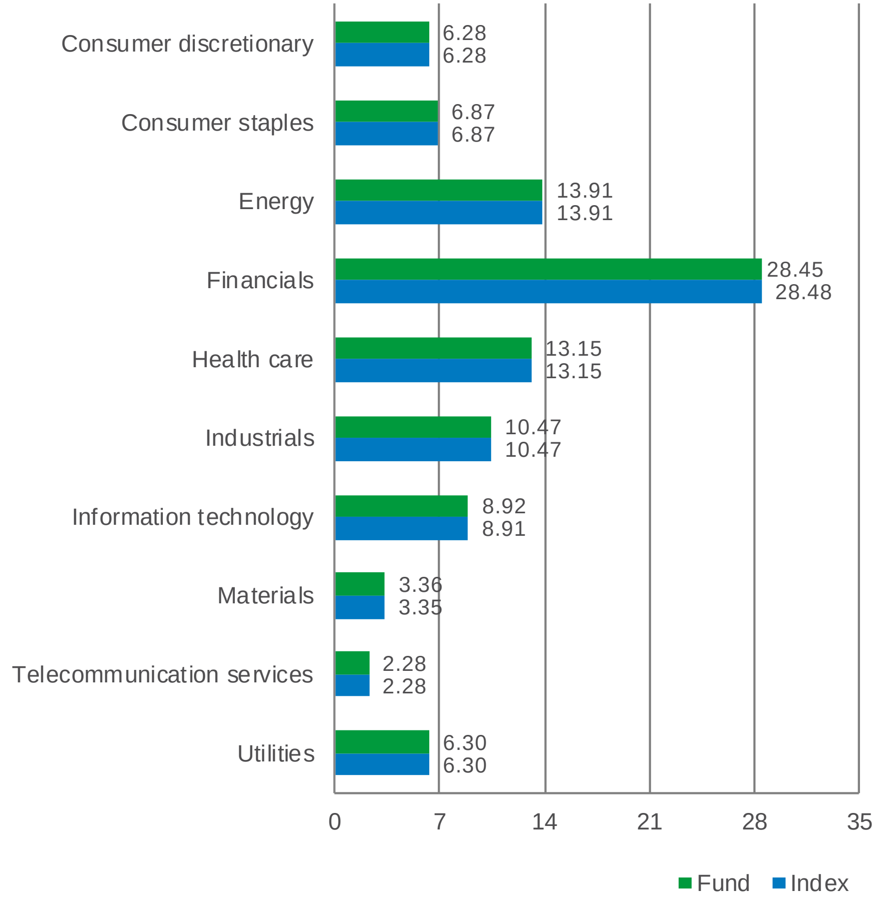
Strategy	Russell 1000® Value Index
Total fund assets	$6.55B
Number of holdings	683

Top 10 holdings

	Fund %	Index %
Exxon Mobil Corporation	4.32	4.32
General Electric Company	2.63	2.63
Wells Fargo & Company	2.51	2.51
Johnson & Johnson	2.49	2.49
Chevron Corporation	2.48	2.48
Berkshire Hathaway Inc. Class B	2.32	2.31
JPMorgan Chase & Co.	2.18	2.18
Procter & Gamble Company	2.00	2.00
Pfizer Inc.	1.89	1.89
AT&T Inc.	1.83	1.83

Ru-1K-Val-A-Ch

Sector diversification



Portions of the above characteristics are based on benchmark data as the portfolio fully replicates benchmark and is for analytical purposes only. Index data may differ to those published by the Index due to calculation methods.
Sources: BlackRock, FactSet

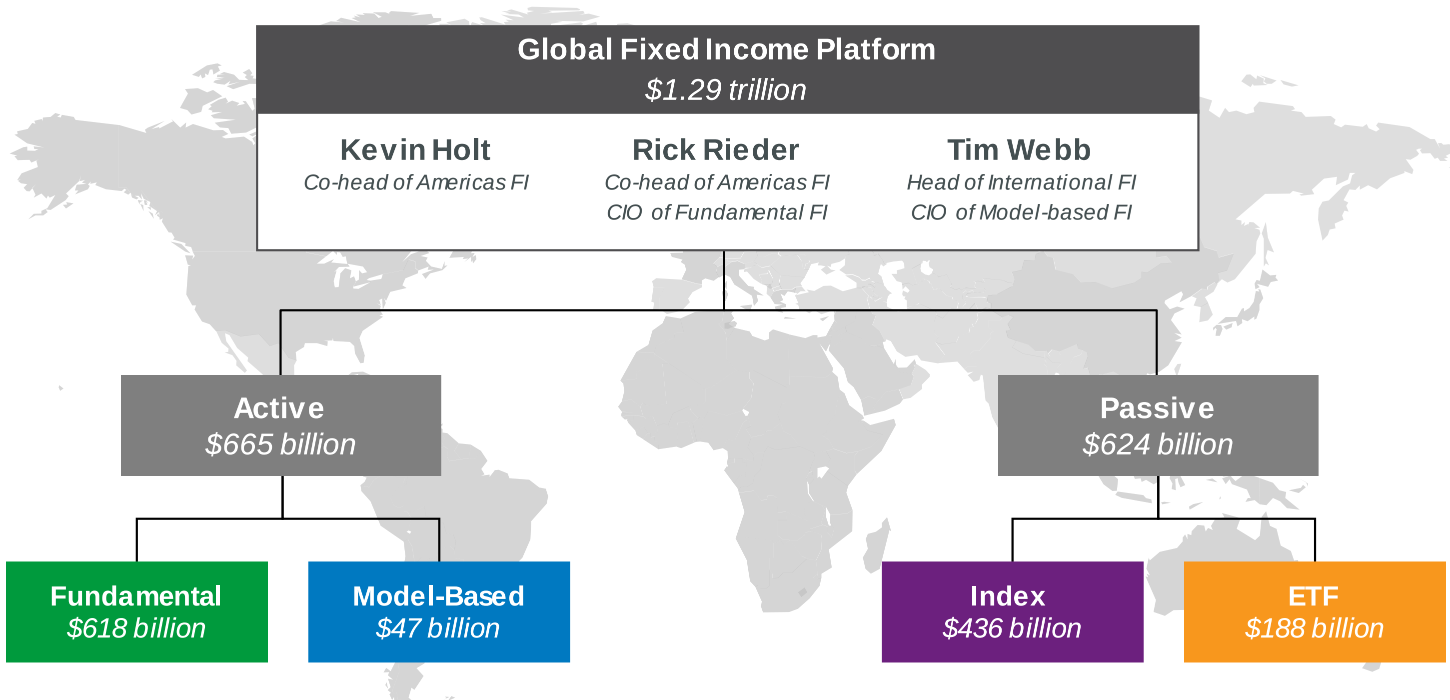
IV. Fixed Income Index Overview & Performance

Global fixed income platform provides greater access to investment opportunities

Benefits of BlackRock's breadth and depth

- **Talent:** 400+ fixed income professionals generate ideas and identify insights to create alpha opportunities
- **Trading:** Global execution platform provides deep market access
- **Technology:** Best-in-class analytics and risk management enables us to better understand and take risk in pursuit of alpha
- **Culture:** Fiduciary commitment to advising and serving clients drives our investment culture

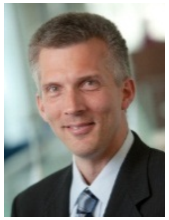
Experienced leadership team oversees portfolio teams with decision-making autonomy



AUM in USD as of 31 March 2014; excludes fixed income alternative assets

BlackRock Model-Based North America Portfolio Solutions Team

The North America portfolio solutions team consists of 24 investment professionals



Scott Radell, CFA, Managing Director, is a Head of US Fixed Income Portfolio Solutions within BlackRock's Model-Based Fixed Income Portfolio Management Group.

Mr. Radell's service with the firm dates back to 2003, including his years with Barclays Global Investors (BGI), which merged with BlackRock in 2009. At BGI, Mr. Radell was the Head of Portfolio Solutions, a group responsible for management and oversight of all US based active fixed income funds. Before founding the Portfolio Solutions Group, he was a portfolio manager responsible for BGI's active investment grade long-only and long/short cross-over portfolios. Prior to joining BGI, Scott served for over seven years as an analyst for corporate bond and Commercial Mortgage Backed Securities for Morgan Stanley Investment Management. Mr. Radell began his career as a fixed income client service and mortgage analysts at BARRA.

Mr. Radell earned a BA degree in economics from quantitative economics and decision sciences from the University of California at San Diego in 1992.

Multi-Sector/Other

Scott Radell
Sr. Portfolio Manager
Multi-Sector

Joel Silva
Sr. Portfolio Manager
Municipals / Canada

Karen Uyehara
Portfolio Manager
Multi-Sector

Tao Chen
Portfolio Manager
Municipal Bonds

Rena Patel
Portfolio Manager
Municipals

Jermaine Pierre
Portfolio Manager
Canada

Jasmita Mohan
Portfolio Manager
Multi-Sector

Shashank Khanna
Jr Portfolio Manager
Canada

Clay Armistead
Portfolio Manager
Securitized Credit

Credit

David Dulski
Portfolio Manager
Corporate Credit

Jonathan Graves
Sr. Portfolio Manager
Corporate Credit

Allen Kwong
Portfolio Manager
Corporate Credit

Eric Souders
Portfolio Manager
Corporate Credit

Nicolas Giometti
Jr Portfolio Manager
Corporate Credit

Elya Schwartzman
Portfolio Manager
Corporate Credit

Garrett Herfkens
Portfolio Manager
Corporate Credit

Leo Landes
Portfolio Manager
Corporate Credit

Jesse Kang
Jr Portfolio Manager
Corporate Credit

Rates/Mortgage/EM

Jay Mauro
Sr. Portfolio Manager
US Government Bonds

Mark Buell
Portfolio Manager
US Government Bonds

Wes George
Portfolio Manager
US Government Bonds

Parry Wang
Portfolio Manager
Agency Mortgages

Daniel Ruiz
Portfolio Manager
Emerging Markets

Gabe Shipley
Portfolio Manager
Emerging Markets

As of 31 March 2014

Total performance management

We believe that superior investment outcomes are best achieved through a disciplined, objective process to managing return, risk and cost

Return

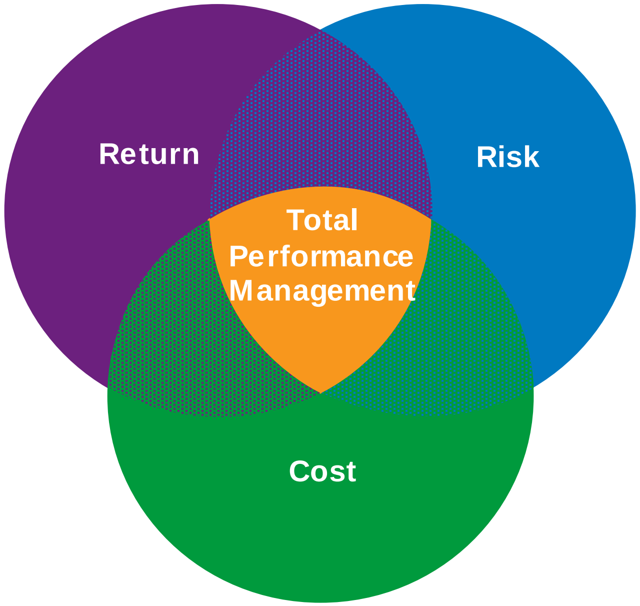
- Performance as planned with value added portfolio management
- Flexible strategies and solutions

Risk

- Proprietary portfolio & risk management systems help manage investment and operational risk

Cost

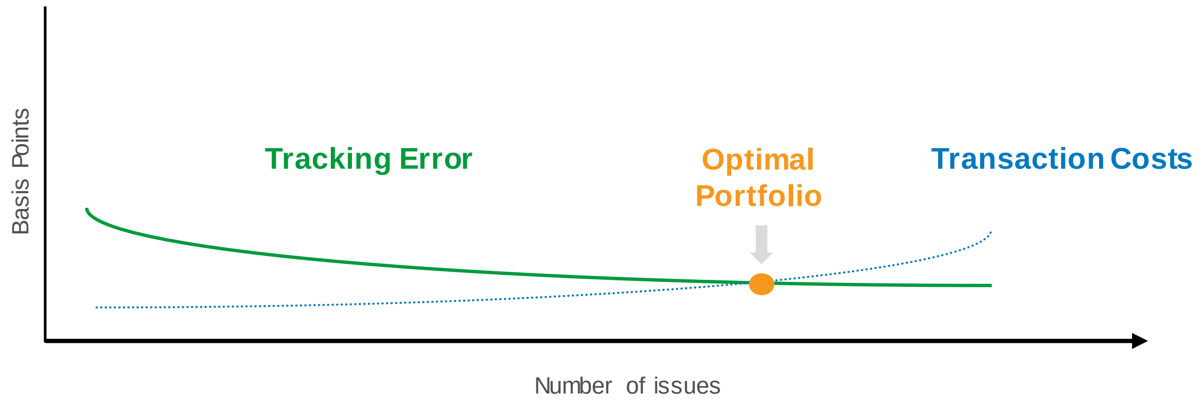
- Trading costs integrated into portfolio construction using proprietary transaction cost models
- Transaction costs minimized through use of internal crossing network
- For all external trading including FX, focus on best execution



Fixed Income indexing: different market, different strategy

Quantitative process balances tracking error & transaction costs

- Unlike equities, Fixed Income is not traded on exchanges
- Prohibitive costs, uncertain liquidity, and issue scarcity often makes perfect replication infeasible
- Index process optimizes marginal contribution to tracking error with T-Costs



For illustrative purpose only.
Source: BlackRock

Index portfolio construction processes

Detailed Benchmark Knowledge

- Daily updates from index providers
- Index methodology changes
- New securities

Index Replication

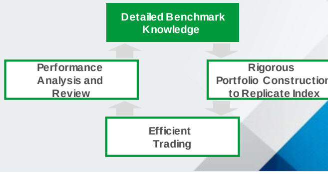
- Portfolio analysis
- Stratified sampling
- Leading edge portfolio construction technology

Efficient Trading

- Expert traders
- Unit exchange opportunities
- Economies of scale

Performance Analysis

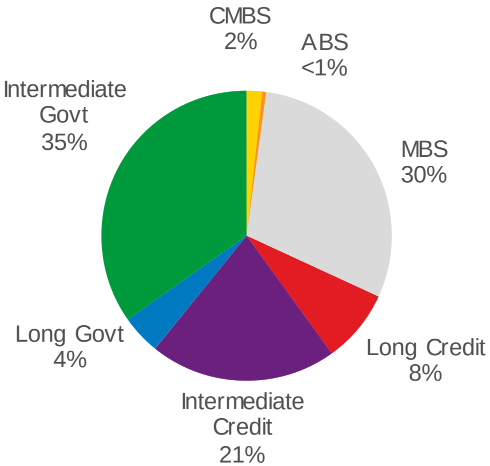
- Investment Review Committee
- Dedicated return attribution
- Independent compliance



Modular Fund Design

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

Barclays US Aggregate
Issues Fund: 7,349
Issues Benchmark: 8,441



Intermediate Government
Issues Fund: 308
Issues B'mark: 811

Long Government
Issues Fund: 72
Issues B'mark: 91

Intermediate Credit
Issues Fund: 3,922
Issues B'mark: 3,972

Long Credit
Issues Fund: 1,772
Issues B'mark: 1,791

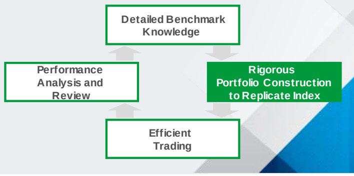
Mortgage-Backed Securities
Issues Fund: 426
Issues B'mark: 426

Asset-Backed Securities
Issues Fund: 154
Issues B'mark: 318

CMBS
Issues Fund: 296
Issues B'mark: 1,028

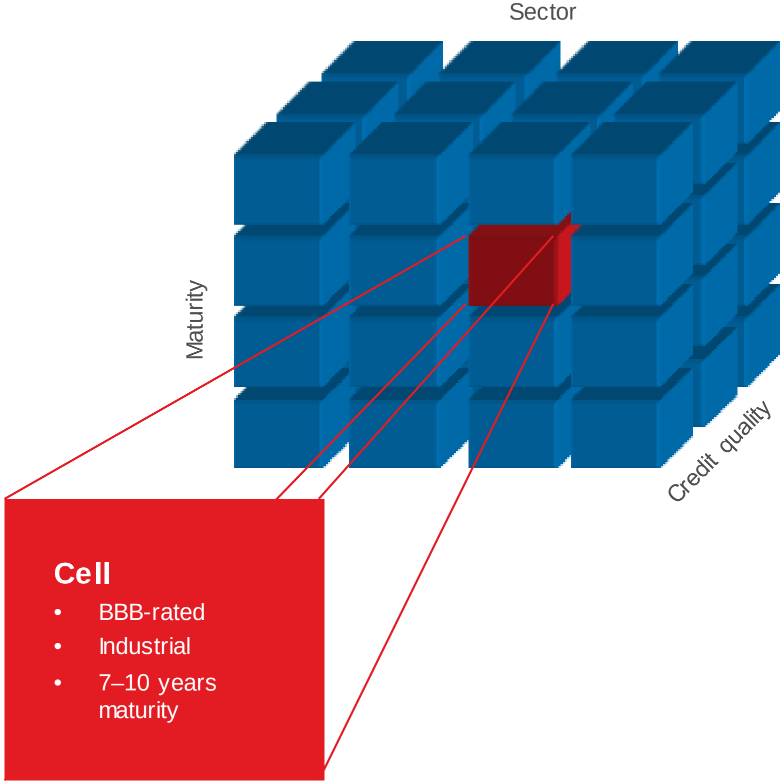
Source: BlackRock; data as of 31 March 2014
*12 month ex-ante risk

Portfolio construction



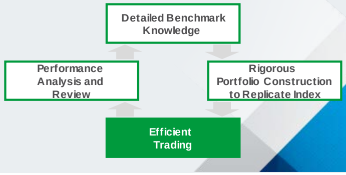
Stratified sampling methodology: Dividing the various indexes into subsets (cells) based upon relative parameters

Government Bonds	Mortgage-Backed Securities	Credit and 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



Portfolios are constructed by sampling bonds from each index cell

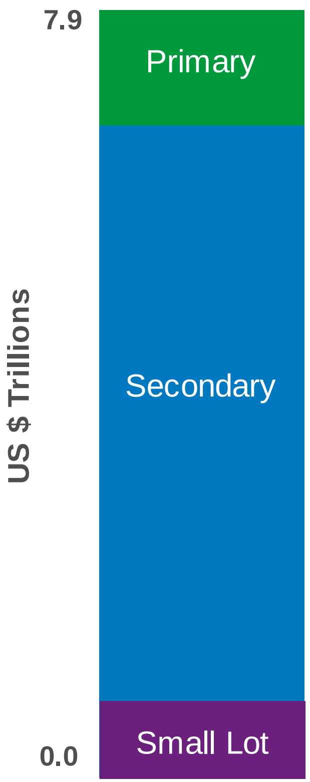
For illustrative purpose only.



BlackRock is the Largest Counterparty to Wall Street

Size and scale are a clear competitive advantage in the Fixed Income marketplace

- BlackRock traded $7.9 trillion of fixed income last year
- Globally coordinated trading business leveraging scale across all investment activity for strong pricing power
- The uniqueness of our breadth and depth benefits our trading experience at all levels of execution



Primary Issuance

- BLK Global Capital Markets/Syndicate manages deal structure as well as optimizes allocations
- BLK drives many “issued to manage” deals which result in reduced fees and increased allocations

Secondary Trading

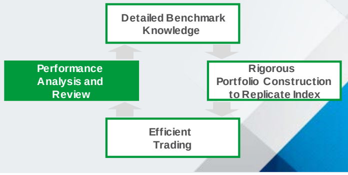
- Pricing power of US$4 trillion annual flow
- Managed trade distribution and optimized execution leverages price discovery, reduces bid/offer spread

Small Lot Trading

- Dedicated unit aggregates firm-wide small lot orders
- Execution benefits from round-lot price improvement

Source: BlackRock; Data as of 31 December 2013

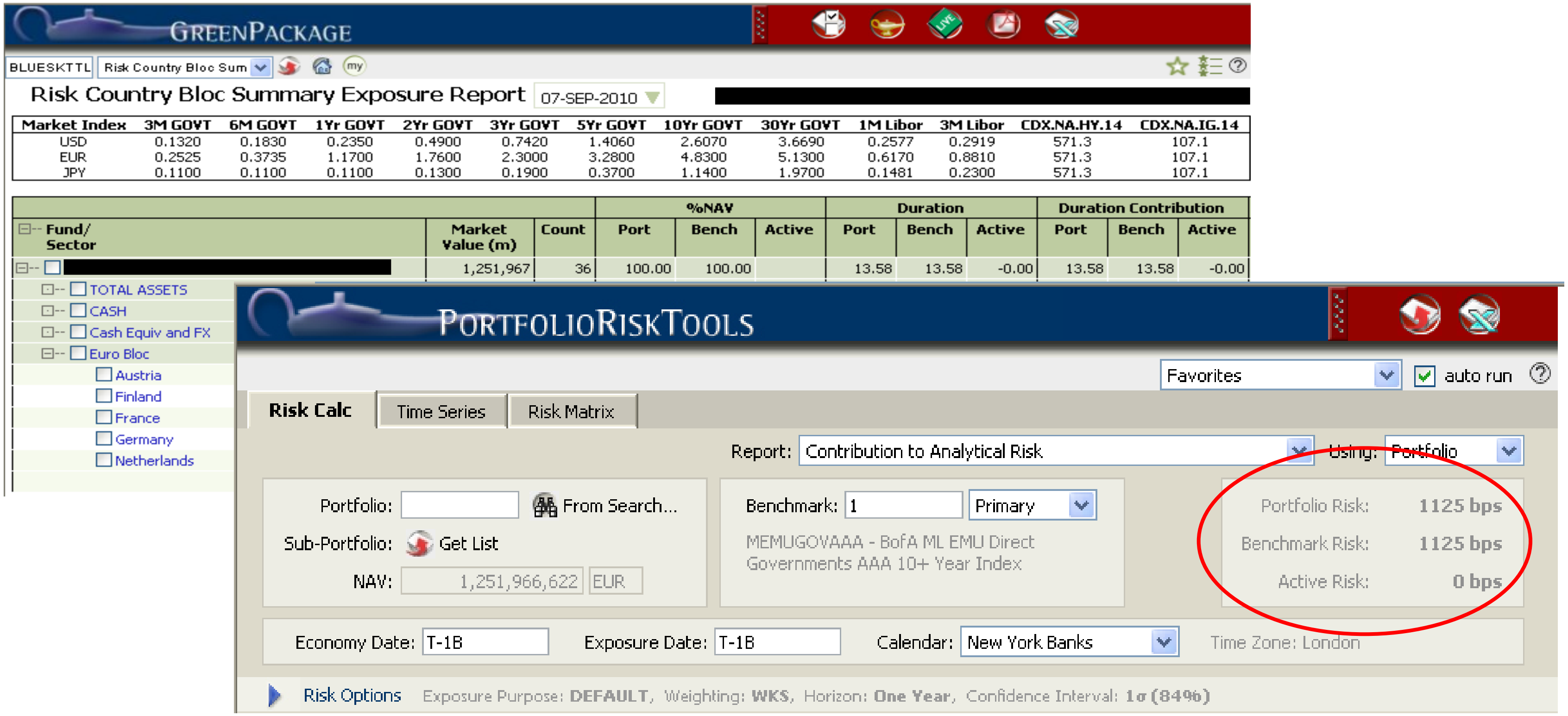
Performance analysis and review



Aladdin® Enterprise System

"One Database, One System, One Process"

- **$14 tln** maintained and analyzed across **2 million** positions
- **180 million** option adjusted calculations per week
- **8,000** live portfolios held by **6,000** Aladdin users



Market Index	3M GOVT	6M GOVT	1Yr GOVT	2Yr GOVT	3Yr GOVT	5Yr GOVT	10Yr GOVT	30Yr GOVT	1M Libor	3M Libor	CDX.NA.HY.14	CDX.NA.IG.14
USD	0.1320	0.1830	0.2350	0.4900	0.7420	1.4060	2.6070	3.6690	0.2577	0.2919	571.3	107.1
EUR	0.2525	0.3735	1.1700	1.7600	2.3000	3.2800	4.8300	5.1300	0.6170	0.8810	571.3	107.1
JPY	0.1100	0.1100	0.1100	0.1300	0.1900	0.3700	1.1400	1.9700	0.1481	0.2300	571.3	107.1

Fund/ Sector	Market Value (m)	Count	%NAV Port	%NAV Bench	%NAV Active	Duration Port	Duration Bench	Duration Active	Duration Contribution Port	Duration Contribution Bench	Duration Contribution Active
[redacted]	1,251,967	36	100.00	100.00		13.58	13.58	-0.00	13.58	13.58	-0.00
TOTAL ASSETS											
CASH											
Cash Equiv and FX											
Euro Bloc											
Austria											
Finland											
France											
Germany											
Netherlands											

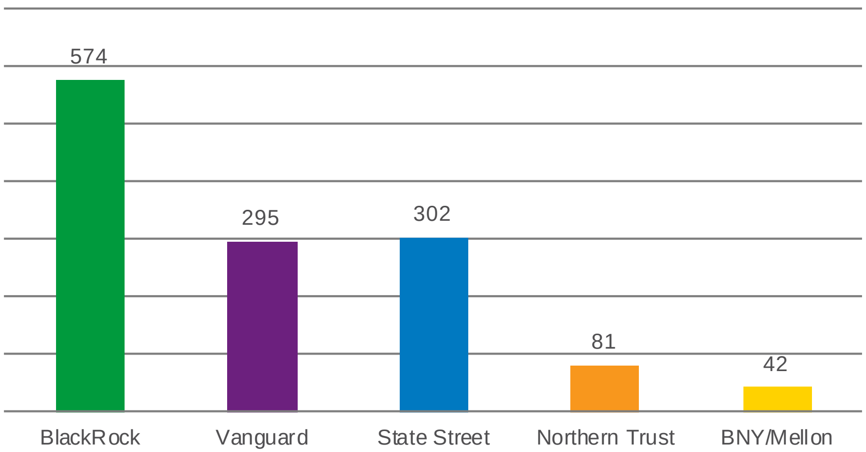
Sample screenshots are for illustrative purpose only.

BlackRock's Index Strategies Have Delivered Superior Performance

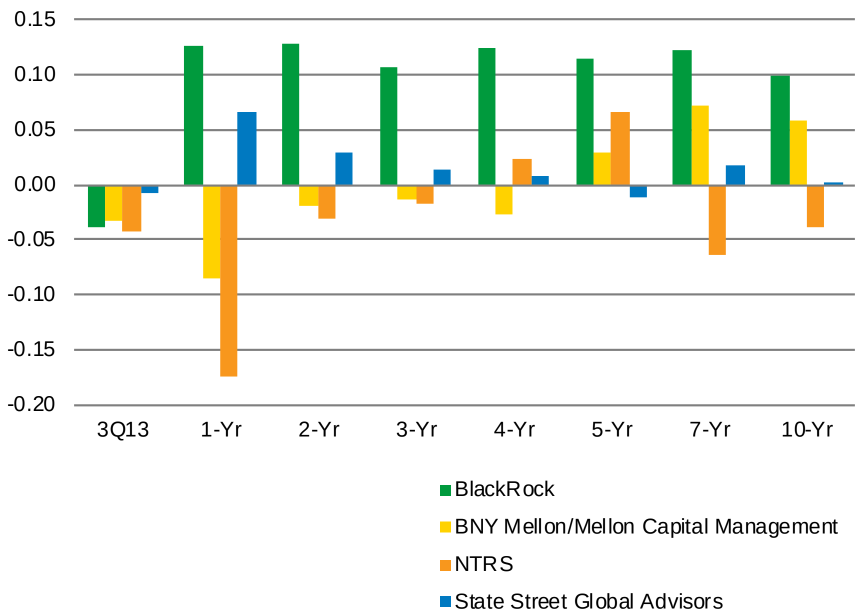
There are four key reasons to pick BlackRock over any other index provider

- Low historical tracking error
- An experienced, stable team
- 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[1]



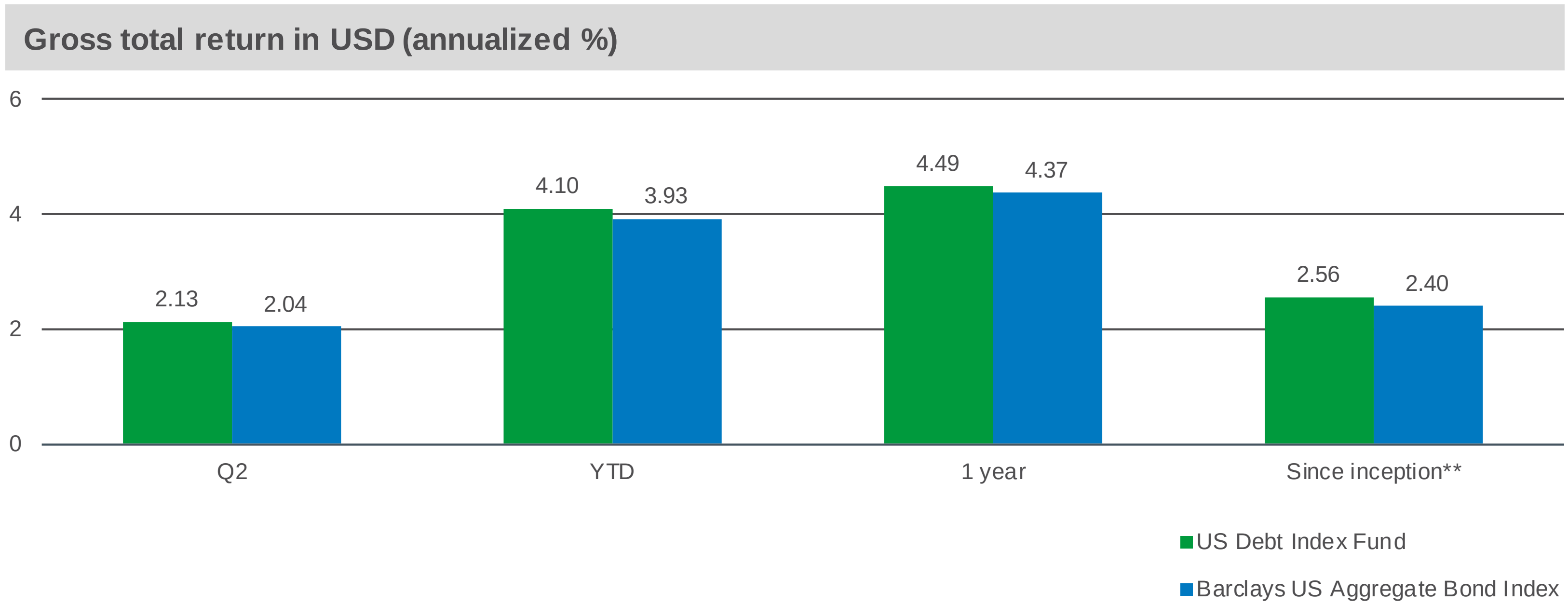
Excess returns vs. Barclays US Aggregate Index[2]



1 Source: Pension & Investments. All dollar values are in $ millions.; data as of 30 June 2013
2 Source: eVestment; data as of 31 December 2013. Past performance is no guarantee of future results. Indexes are unmanaged and one cannot invest directly in an index.

US Debt Index Fund Performance

As of 30 June 2014



	Q2* %	YTD* %	1-yr %	Since incept %
Tracking error (Gross vs. Benchmark)	0.09	0.17	0.12	0.16

* Unannualized
** Client inception date 12/30/11
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 II of BlackRock's Form ADV. Past results are not necessarily indicative of future results

Portfolio profile

As of 30 June 2014

US Debt Index Fund	US Debt Index Fund	Barclays Aggregate Bond Index
Market value ($B)	7.81	17,197.18
# Issues	7,395	8,819
Characteristics		
Coupon (%)	3.29	3.30
Nominal yield (%)	2.00	2.00
Current yield (%)	3.13	3.13
Yield to maturity (YTM) (%)	2.01	2.01
Weighted avg life (yrs)	6.87	6.90
Effective duration (yrs)	5.11	5.10
Spread duration	3.72	3.72
Option adjusted spread (bps)	31	31
Convexity	0.08	0.08
Moody rating	Aa2	Aa2
S&P rating	AA	AA
Quality breakdown (mkt val %)		
AAA or above	72.40	72.48
AA	4.01	3.98
A	11.49	11.47
BBB	12.10	12.06
Other	0.00	0.01

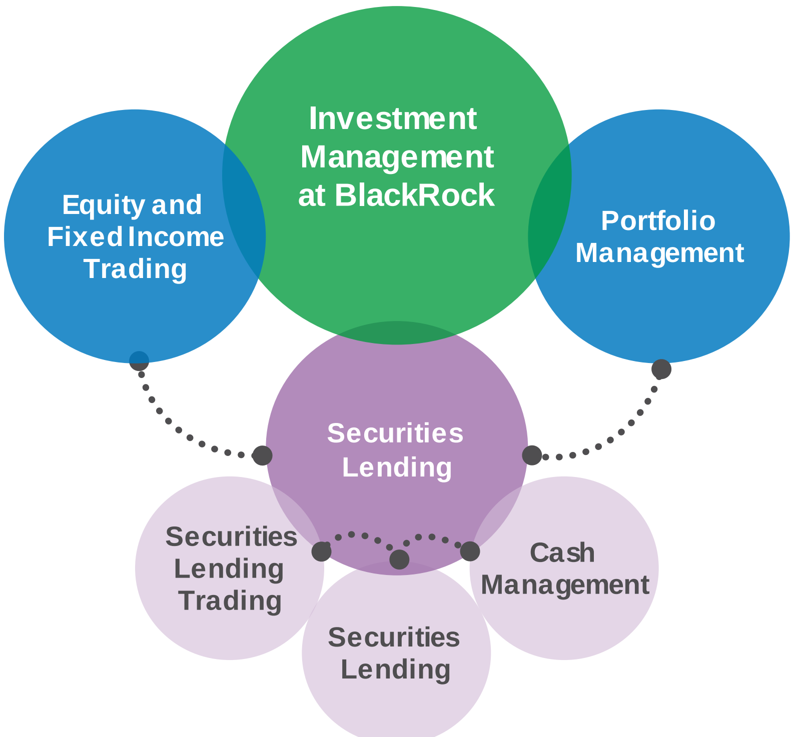
	US Debt Index Fund	Barclays Aggregate Bond Index
Sector breakdown (mktval %)		
Treasury	35.49	35.26
Agencies	3.21	3.64
Financials	7.57	7.58
Industrials	13.92	13.83
Utilities	1.76	1.79
Non-US credit	5.26	5.31
Taxable munis	0.92	1.00
ABS	0.47	0.48
Mortgages	28.58	28.51
Hybrid ARM	0.42	0.41
CMBS	1.91	2.14
Foreign Government	0.00	0.05
Cash	0.51	0.00
Weighted avg life breakdown (mkt val %)		
0-1	1.21	0.29
1-2	10.41	12.91
2-3	21.07	18.28
3-5	24.41	25.28
5-7	16.74	16.26
7-10	13.35	14.02
10-20	2.94	3.11
20-30	9.57	9.51
30+	0.31	0.34

Data are for analytical purposes only. Index data may differ to those published by the Index due to calculation methods
Breakdowns may not sum to total due to rounding, exclusion of cash, STIF, and statistically immaterial factors
Source: BlackRock

V. Securities Lending Overview

Securities Lending at BlackRock: BlackRock's investment management approach

Talented professionals and a quantitative approach make Securities Lending an integrated business



BlackRock's Securities Lending Team employs professionals in New York, San Francisco, London, and Hong Kong

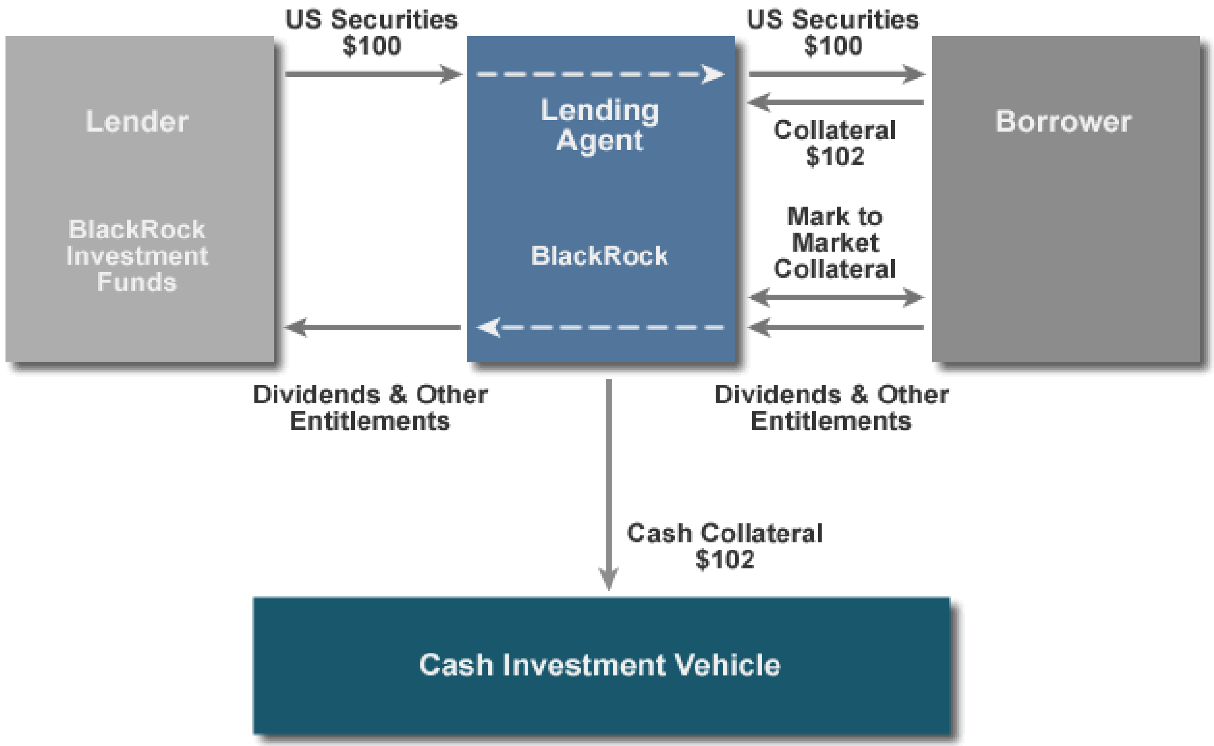
- Coordination between Portfolio Management and Equity and Fixed Income Trading allows BlackRock to start the recall process before trades are executed
- Coordination between Portfolio Management and Securities Lending improves the ability to extract premiums available in the market around corporate actions and index changes
- Securities Lending is treated as part of the investment management process
- Integration of Securities Lending Trading & Cash Management helps enhance overall return & facilitates a more efficient management of risk
- Research develops tools and signals that help traders and Portfolio Managers extract additional value

Securities Lending is an integrated product at BlackRock

Source: BlackRock

How does Securities Lending work?

The mechanics of a loan transaction



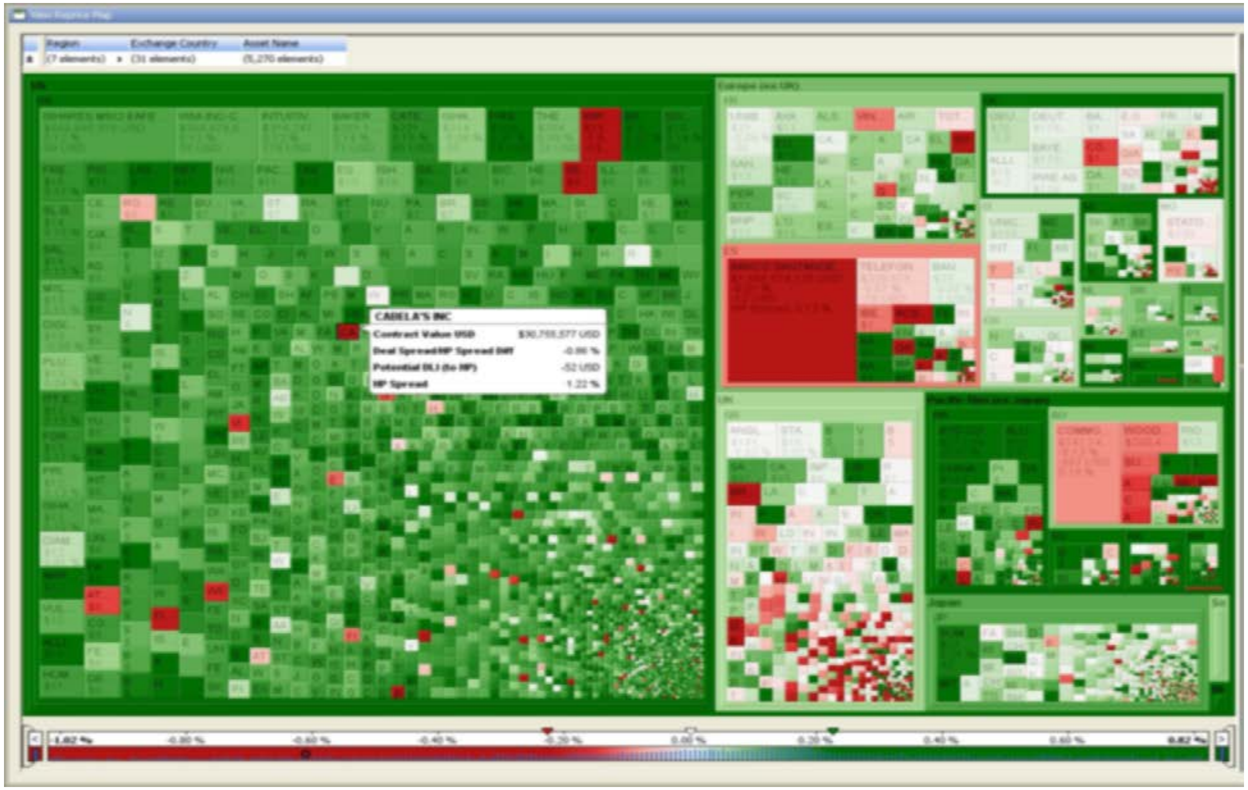
For illustrative purposes only

Securities Lending at BlackRock: Using information to our advantage

The vast majority of on loan positions are >1 day old;

Capturing re-pricing opportunities is a key component in outperforming competitors

- **Green color** highlights where BLK average spread is greater than the market average spread
- **Red color** highlights repricing opportunities; the larger the box, the bigger the opportunity to impact daily lending income



Reprice heat map ensures traders focus on the most impactful re-rates

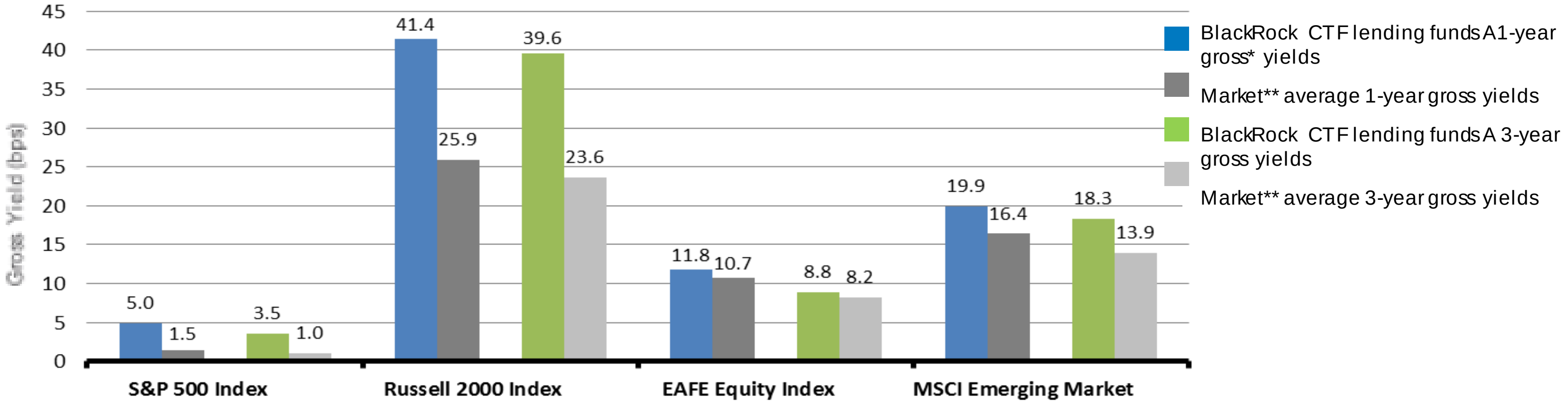
Source: BlackRock. For illustrative purpose only
Forecasts, estimates, and certain information contained herein are based upon proprietary research and should not be considered as investment advice or a recommendation of any particular security, strategy or investment product. No representation is being made that any account, product, or strategy will or is likely to achieve profits. No assurance is being made that this favorable market activity will be repeated

Not all Sec Lending programs are created equal…

BlackRock takes an investment management approach to all areas of portfolio management, including securities lending

- BlackRock's dedicated securities lending team seeks best execution in each transaction
- This approach has resulted in the sec lending yields out-performing the market for 1 and 3 year periods[1]

BlackRock 1 and 3 year Sec Lending yields (pre-split) — ann bps*



	1 yr	3yr	1 yr	3yr	1 yr	3yr	1 yr	3yr
BLK outperformance (bps)	+2.50	+3.47	+16.00	+15.50	+0.67	+1.09	+4.41	+3.55
BLK outperformance (%)	+246.7%	+232.4%	+67.7%	+59.8%	+8.2%	+10.2%	+31.7%	+21.6%

1 year: 1 Jan 2013 — 31 Dec 2013

3 year: 1 Jan 2011 — 31 Dec 2013

* Lending yield = securities lending income for a fund divided by the fund's daily assets under management (AUM.) One basis points (bps) is equivalent to 0.01%
** Market performance over the same assets held in each fund as defined by Markit Securities Finance (formerly, Data Explorers)
Past performance is not indicative of future results. Indexes are unmanaged and one cannot invest directly in an index
1 Source: Markit Securities Finance (formerly, Data Explorers), as of 31 December 2013. Securities Lending Yields include reinvestment performance and are reflected prior to any negotiated splits

BlackRock's Securities Lending Risk Management

BlackRock's size and scale provide a competitive advantage in mitigating the risks associated with securities lending

BlackRock's securities lending activity, for U.S. collective funds, is executed in our clients' best interest and with a focus on prudent investment and risk management

BlackRock took steps to materially reduce risks associated with securities lending following the financial crisis, as outlined below

Counterparty risk	‣ 17 members of BlackRock's Credit Research team solely dedicated to counterparty monitoring ‣ 56 counterparty relationships provide BlackRock increased flexibility and diversification of counterparty risk ‣ Borrower default simulations conducted on a regular basis
Collateral risk	**In the US securities lending program:** ‣ BlackRock accepts only US Cash and certain Government securities as collateral despite broader guidelines permitted by ERISA ‣ New loans are collateralized at least at 102% for US securities and 105% for non-US securities ‣ Securities are marked to market on a daily basis
Reinvestment risk	‣ In 2012, the OCC adopted new rules governing short-term investment funds, which apply to BTC's cash collateral reinvestment funds ‣ BTC's short-term investment fund guidelines around WAL and WAM have been restricted to effectively mirror SEC Rule 2a-7 guidelines ‣ BTC's investment focus is to operate with a stable net asset value of $1.00 per unit, which is a part of each short-term investment fund's investment objective

As of 31 March 2014. For more information please see our Short-Term Investment Fund Guidelines

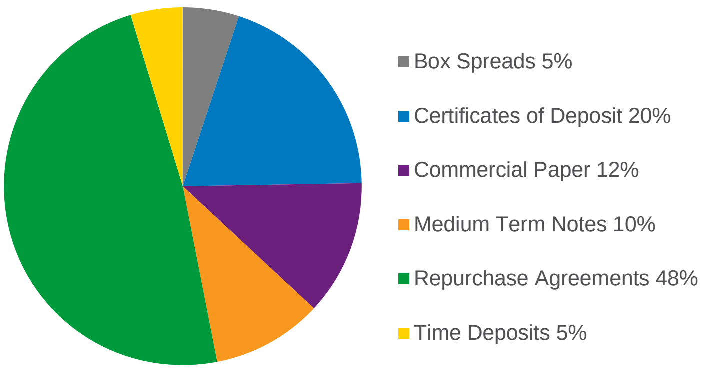
Cash Equivalent Fund II

Fund overview

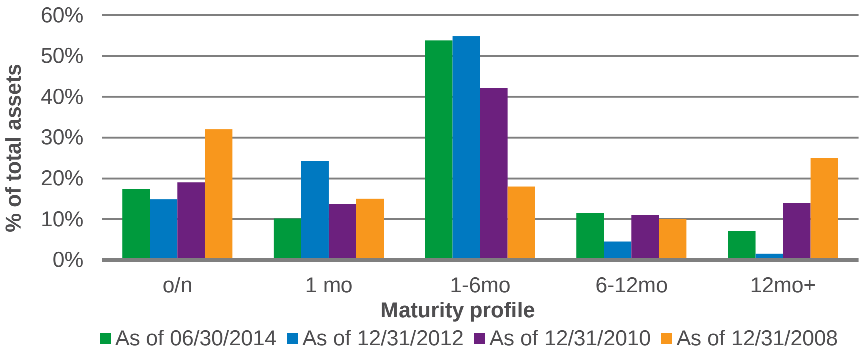
Cash Equivalent Fund II (the "Fund") invests the cash collateral received in connection with loans of securities from certain BlackRock collective investment funds. The objective of this fund is to seek as high a level of current income as is consistent with liquidity and stability of principal and to operate with a stable net asset value of $1.00 per unit.

Fund size	$49,316,363,810
Overnight liquidity[1]	17% of total assets
Securities with maturities < 2 months[3]	57% of total assets
Weighted Average Maturity[4]	38 days

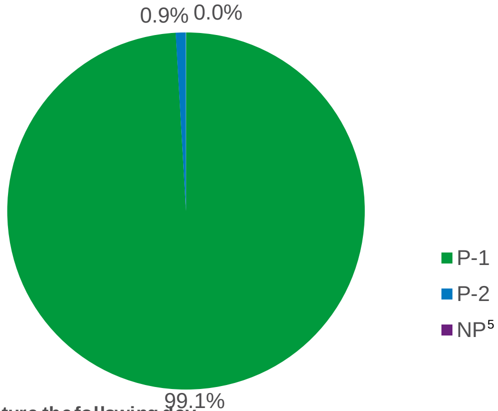
Investment allocation



Portfolio maturity profile



Moody's credit ratings of portfolio holdings[2]



1. Overnight liquidity represents the percentage of fund invested in securities and other assets that mature the following day
2. Portfolio holdings and P-1 issuers that do not have a short-term Moody's rating are included in the "P-1" rating. Some ratings may be implied if the instrument is not explicitly rated. BlackRock's credit team assesses unrated instruments to determine if they are of equivalent credit quality.
3. Includes overnight liquidity
4. Weighted Average Maturity (WAM) is a portfolio's dollar weighted average maturity or exposure to interest rate risk (similar to duration) typically measured in days. For example, in calculating WAM, floating rate assets are measured to their next reset date and fixed rate assets are measured to their final maturity.
5. Allocations may be greater than 0% but round down to zero.

All data as of 30 June 2014; Source: BlackRock

Important notes

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BLK-0843-0613

Appendix

What is Strategic Beta?

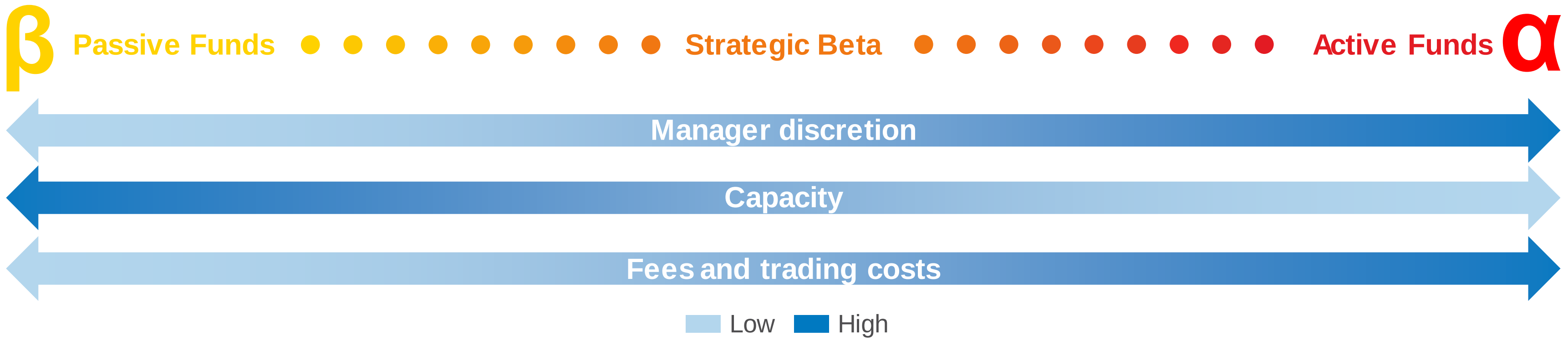
Strategic Beta is a systematic investment strategy that retains many of the benefits of passive strategies

- Attempts to enhance risk-adjusted returns through exposure to desirable risk factors
- Allows investors to capture drivers of returns more accurately and efficiently than traditional indices
- May include equity, fixed income or multi-asset strategies
- Offers targeted exposure to individual risk factors or a combination of factors for investors seeking more diversified solutions

Potential Outcomes:

Enhanced risk-adjusted returns | **Enhanced diversification** | **Reduced volatility** | **Tactical factor exposures**

Strategic Beta has transformed the active-passive landscape from an either/or classification to a continuum



The Evolution in Strategic Beta

Cap-weighted benchmarks have long been the accepted standard

- Self rebalancing
- Emphasis on larger names enhances liquidity
- Low turnover and T-costs
- Incorporates the collective wisdom of all global investors

However…

- Incorporates the collective neuroses of the masses
- Price-driven weights result in large positions in ‘over-valued’ securities

“Strategic Beta” indices seek to address these weaknesses by capturing the equity opportunity set in a novel way

- Minimum volatility indices seek to exploit a well known anomaly in market behavior
- Fundamental indices eschew capitalization as a measure of “size”
- Economic Exposure indices focus on companies that derive revenue in Emerging Markets
- Risk Factor portfolios efficiently capture well known sources of risk and return

A rapidly growing category

- BlackRock manages approximately $35bn in Strategic Weighted Equity strategies as of 6/30/2014

Minimum Volatility strategies

Fund	Inception	AUM ($mm)
MSCI US Minimum Volatility Index A	10/23/2012	$547
MSCI Developed ex US Minimum Volatility A	11/20/2013	$131
MSCI EM Minimum Volatility Index A	Ready to seed	--
MSCI ACWI Minimum Volatility A	8/13/2013	$654
MSCI ACWI Minimum Volatility B	6/10/2014	$77
Russell 1000 Defensive Index Plus A	2/12/2011	$1,060
iShares US Min Vol	10/18/2011	$2,624
iShares ACWI Min Vol	10/18/2011	$1,224
iShares Emerging Markets Min Vol	10/18/2011	$1,931
iShares EAFE Min Vol	10/18/2011	$1,202
Total Minimum Volatility Assets (including iShares, UK funds and sep accts)		**$15.5 bn**

As of 6/30/2014

The minimum volatility anomaly

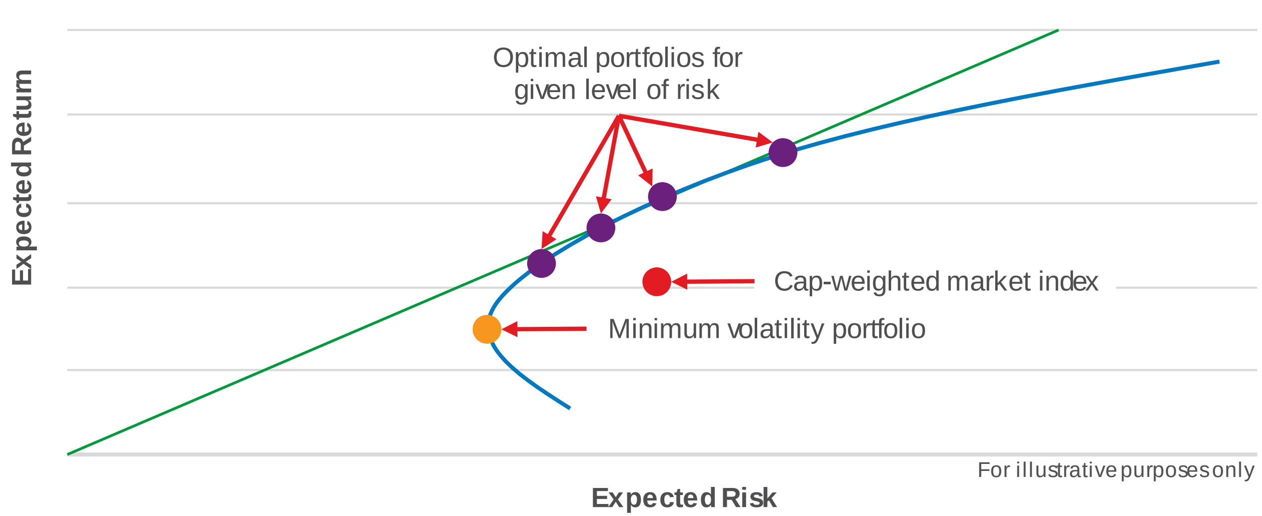
Higher return for higher risk?

- Modern portfolio theory tells us that there is an equity risk premium – market bets are expected to be rewarded proportionally to the risk taken
- The "optimal" portfolio is the one offering the highest return for the accepted level of risk

But there seems to be a "free lunch"

- Empirically we observe that Minimum Volatility portfolios can provide more return per unit of risk than cap-weighted portfolios
- Research[1] suggests existence of investors overpaying for higher beta stocks
- Asset managers have little incentive to prefer low beta stocks given the level of "Active Risk" created

Efficient frontier and the Minimum Volatility index portfolio



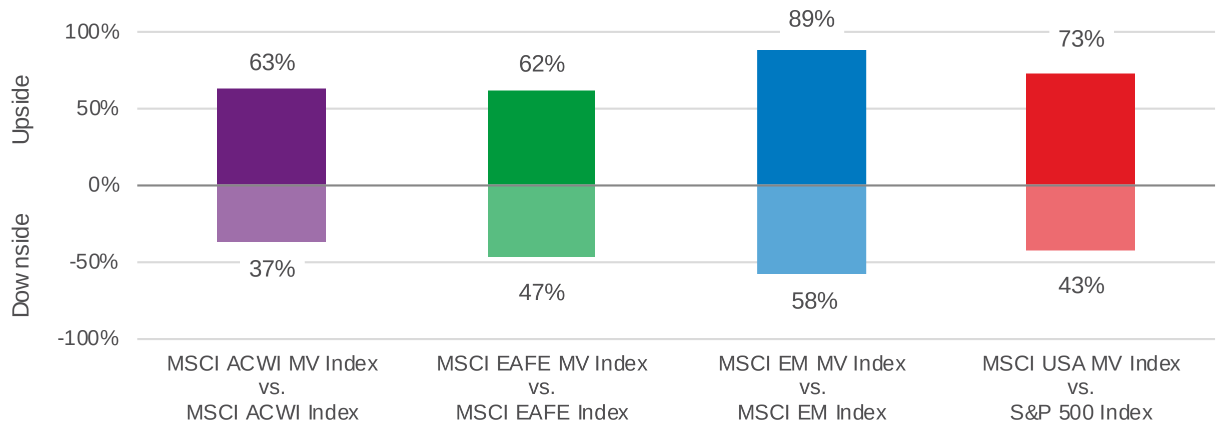
For illustrative purposes only

[1]Benchmarks as Limits to Arbitrage: Understanding the Low Volatility Anomaly Baker, Bradley Wurgler 2010

Asymmetry: the magic of minimum volatility

MV portfolios deliver the downside risk protection you expect from a low beta portfolio… but with more upside capture

- It's this **asymmetry** that makes Minimum Volatility so compelling – significantly improved risk adjusted returns
- Risk reduction of approximately 30 – 50% relative to cap weighted benchmarks
- This cannot be captured in a portfolio of Index + Cash: the anomaly lies in the mispricing of individual low beta names



- Since inception, the MSCI MV Indices have captured **more upside than downside** relative to cap weighted benchmarks
- The chart at left displays the **percentage of the upside and downside (relative to benchmark returns) that the MV indices have captured since inception**

The Minimum Volatility effect can be efficiently and inexpensively captured in an index fund

- We fully replicate the desired MV benchmark – consistently deliver benchmark returns as we would for any other benchmark

Source: MSCI, as of Dec 31. 2013
Based on monthly index returns since 12/31/2001.

Minimum Volatility strategies provide (some) shelter

As of Jun 30, 2014	YTD 2014	1 Year	3 Years	5 Years	10 Years	Annualized Total Risk	Return/Risk
MSCI USA Minimum Volatility Index	6.1%	17.3%	15.3%	17.9%	9.0%	11.6%	.78
MSCI USA Index	7.1%	25.0%	16.6%	19.0%	8.0%	14.7%	.54
Relative return	*-1.1%*	*-7.7%*	*-1.2%*	*-1.0%*	*1.0%*	***38% less risk***	
MSCI EAFE Minimum Volatility Index	9.1%	19.3%	10.3%	12.6%	9.6%	13.0%	.74
MSCI EAFE Index	5.1%	24.1%	8.6%	12.3%	7.4%	18.3%	.41
Relative return	*3.9%*	*-4.8%*	*1.7%*	*0.4%*	*2.2%*	***49% less risk***	
MSCI EM Minimum Volatility Index	5.6%	8.0%	5.7%	14.9%	15.9%	19.1%	.83
MSCI Emerging Markets Index	6.3%	14.7%	-0.1%	9.6%	12.3%	23.8%	.52
Relative return	*-0.8%*	*-6.7%*	*5.7%*	*5.3%*	*3.6%*	***36% less risk***	
MSCI ACWI Minimum Volatility Index	6.7%	14.5%	11.3%	16.7%	9.4%	11.2%	.85
MSCI ACWI Index	6.5%	23.6%	10.9%	14.9%	8.0%	16.6%	.48
Relative return	*0.2%*	*-9.0%*	*0.4%*	*1.8%*	*1.4%*	***55% less risk***	

Source: MSCI.
Benchmark returns are total return gross dividend. Returns in excess of one year are annualized. Data through 6/30/2013.
Because standard deviation is not proportional, percent risk reduction is calculated in variance terms.
Total Risk is annualized 10 year monthly standard deviation. Return/risk ratio based on 10 years of data through 6/30/2013.

Minimum Volatility Portfolio Application I:
Maintain asset allocation while lowering portfolio volatility

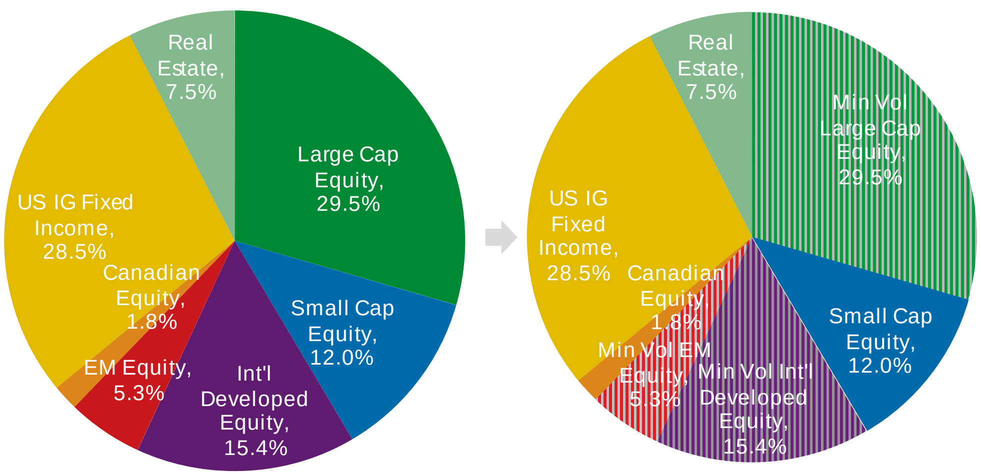
Challenge: Clients want to lock-in pension funding status

- Active and market-cap based equity strategies exhibit high volatility
- Pension plan needs to adhere to policy asset-allocation guidelines

Benefits: Stay in current asset allocation while achieving lower *equity* beta to market

- Lowered overall total portfolio volatility
- Stay invested in equity markets to capture growth potential and/or to reach fully-funded status
- Avoid holding additional fixed income assets which currently exhibit low yield and potential for negative total returns
- Lock in gains from high-beta equity managers

Case Study: Median Public Pension Plan*



12/2009 to 12/2013*	Public LPP	Public LPP min vol
Annualized Return	11.4	11.6
Annualized Standard Deviation	10.7	8.1
Sharpe Ratio	1.05	1.38
Max Drawdown Return	-13.5	-8.0
Max Drawdown Period	05/2011 - 09/2011	06/2011 - 09/2011

*Median Public Pension Plan results as of 02/2013 provided by P&I
**Portfolio statistics use underlying index returns as of 12/31/2013. Longest common time period of returns are shown. Portfolio assume annual rebalance.

ACWI ex-US Small Cap Fund Characteristics

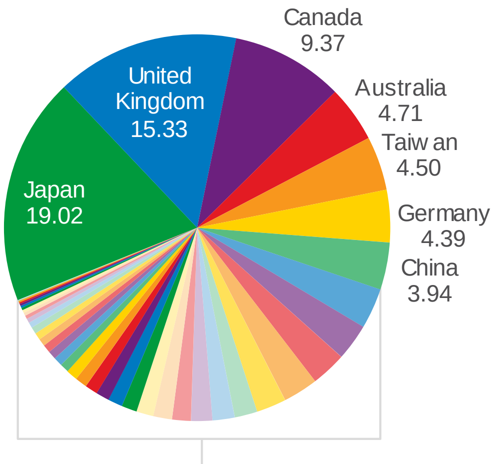
As of 30 June 2014

Characteristics	
Strategy	**MSCI ACWI ex-US Small Cap Index SM**
Total fund value	$0.67B
Number of issues in fund	4,315

Top 10 holdings

	Country	Weight (%)
Ashtead Group PLC	United Kingdom	0.26
St. James's Place PLC	United Kingdom	0.23
Symrise AG	Germany	0.23
Mondi PLC	United Kingdom	0.23
Taylor Wimpey PLC	United Kingdom	0.22
Barratt Developments PLC	United Kingdom	0.22
Clariant AG	Switzerland	0.20
Provident Financial PLC	United Kingdom	0.19
Berkeley Group Holdings PLC	United Kingdom	0.18
Bankinter SA	Spain	0.18

Country allocation (%)



Korea	3.39	Netherlands	1.11	Poland	0.29
Switzerland	3.06	Finland	1.06	Chile	0.26
Sweden	2.94	Malaysia	1.00	Philippines	0.25
France	2.92	Belgium	0.94	Russia	0.20
Italy	2.49	Thailand	0.75	Egypt	0.18
Spain	1.90	New Zealand	0.74	Greece	0.18
Hong Kong	1.86	Indonesia	0.70	Qatar	0.12
Singapore	1.78	Israel	0.68	United Arab Emirates	0.11
South Africa	1.57	Ireland	0.63	Colombia	0.03
Norway	1.56	Austria	0.59	Czech Republic	0.03
India	1.43	Mexico	0.57	Peru	0.03
Denmark	1.29	Portugal	0.46	Hungary	0.02
Brazil	1.22	Turkey	0.37		

ACWI-ex-US-Sm-Cap-Idx-Ch

This information is unaudited and intended for analytical purposes only
Sources: BlackRock, FactSet

ACWI ex-US Small Cap Index Fund

Fund overview

BlackRock's ACWI ex-US Small Cap Index Fund is designed to replicate the total return of the Morgan Stanley Capital International (MSCI) All Country World Small Cap Index℠ (ACWI) ex-US.

Performance

ACWI ex-US Small Cap Fund performance (as of 30 June 2014)

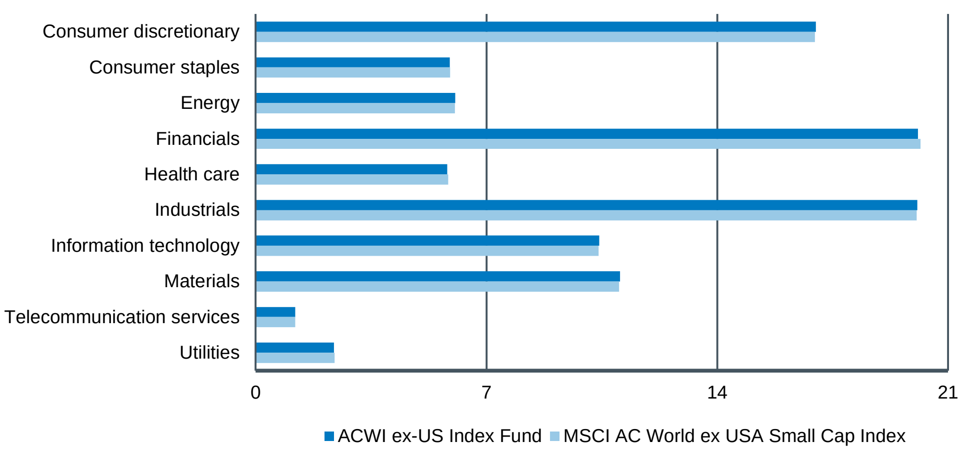
Total return % in USD*

	Q2* %	YTD* %	1 year %	3 year %	Since incept** %
ACWI ex-US Small Cap	3.78	7.38	26.30	7.17	5.12
Benchmark (MSCI AC World ex USA Small Cap Index)	3.64	7.24	26.09	6.90	4.83
Relative return (Gross vs. Benchmark)	**0.14**	**0.14**	**0.21**	**0.27**	**0.29**

- Returns for periods greater than one year are annualized

** Fund inception: 29 April 2011

Sector allocation (as of 30 June 2014)



Strategy details

Benchmark	MSCI AC World ex USA Small Cap Index
AUM	$0.67 B

Characteristics (as of 30 June 2014)

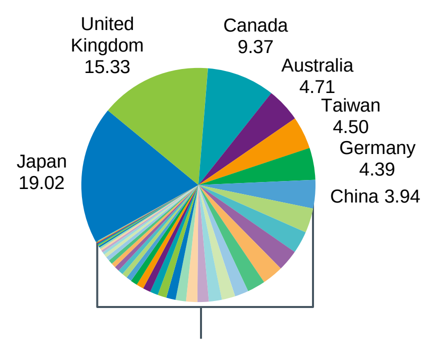
	Fund
Number of issues	4,315
Dividend yield	2.32

Top 10 holdings (%)

(as of 30 June 2014)

	Country	Weight (%)
Ashtead Group PLC	United Kingdom	0.26
St. James's Place PLC	United Kingdom	0.23
Symrise AG	Germany	0.23
Mondi PLC	United Kingdom	0.23
Taylor Wimpey PLC	United Kingdom	0.22
Barratt Developments PLC	United Kingdom	0.22
Clariant AG	Switzerland	0.20
Provident Financial PLC	United Kingdom	0.19
Berkeley Group Holdings PLC	United Kingdom	0.18
Bankinter SA	Spain	0.18

Country allocation (as of 30 June 2014)



Korea	3.39	Finland	1.06	Philippines	0.25
Switzerland	3.06	Malaysia	1.00	Russia	0.20
Sweden	2.94	Belgium	0.94	Egypt	0.18
France	2.92	Thailand	0.75	Greece	0.18
Italy	2.49	New Zealand	0.74	Qatar	0.12
Spain	1.90	Indonesia	0.70	United Arab	
Hong Kong	1.86	Israel	0.68	Emirates	0.11
Singapore	1.78	Ireland	0.63	Colombia	0.03
South Africa	1.57	Austria	0.59	Czech	
Norway	1.56	Mexico	0.57	Republic	0.03
India	1.43	Portugal	0.46	Peru	0.03
Denmark	1.29	Turkey	0.37	Hungary	0.02
Brazil	1.22	Poland	0.29		
Netherlands	1.11	Chile	0.26		

Portions of the above characteristics are based on benchmark data as the portfolio fully replicates benchmark and is for analytical purposes only. Index data may differ to those published by the Index due to calculation methods. Breakdowns may not sum to total due to rounding, exclusion of cash, STIF, and statistically immaterial factors
This information is unaudited and intended for analytical purposes only
Sources: BlackRock, FactSet

Cash Collateral Funds

Cash Equivalent Fund II

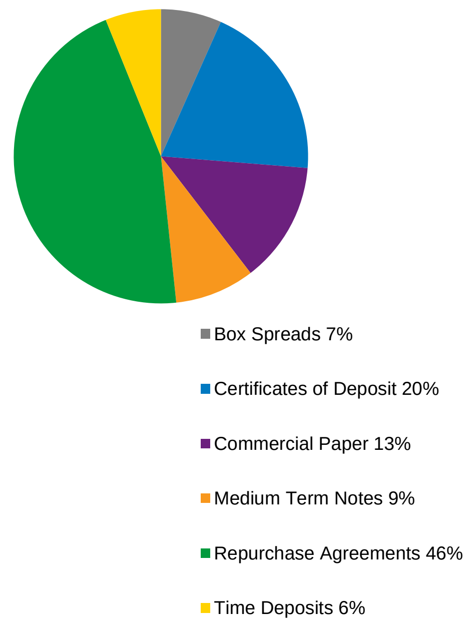
Fund overview

Cash Equivalent Fund II (the "Fund") invests the cash collateral received in connection with loans of securities from certain BlackRock collective investment funds. The objective of this fund is to seek as high a level of current income as is consistent with liquidity and stability of principal and to operate with a stable net asset value of $1.00 per unit.

Fund size	$51,171,948,993
Overnight liquidity[1]	18% of total assets
Securities with maturities < 2 months[3]	55% of total assets
Weighted Average Maturity[4]	41 days

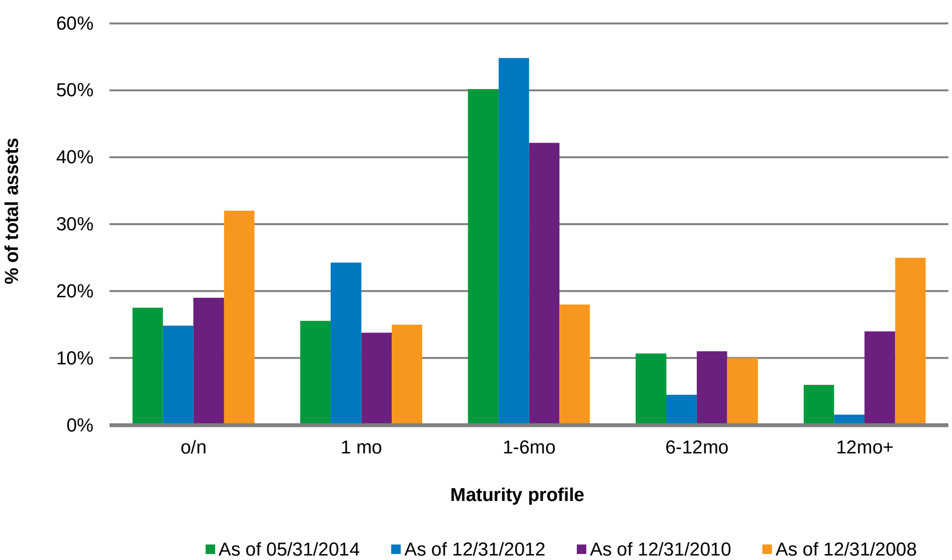
All data as of 31 May 2014
Source: BlackRock

Investment allocation



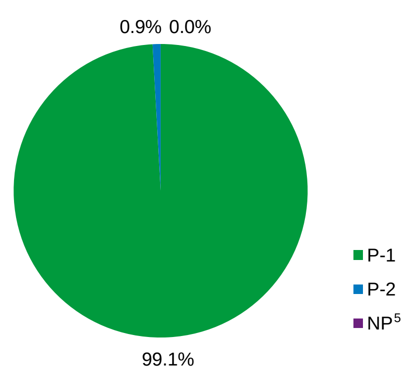
As of 31 May 2014
Source: BlackRock

Portfolio maturity profile



Source: BlackRock
As of 31 May 2014

Moody's credit ratings of portfolio holdings[2]



As of 31 May 2014
Source: BlackRock

1. Overnight liquidity represents the percentage of fund invested in securities and other assets that mature the following day
2. Portfolio holdings and P-1 issuers that do not have a short-term Moody's rating are included in the "P-1" rating. Some ratings may be implied if the instrument is not explicitly rated. BlackRock's credit team assesses unrated instruments to determine if they are of equivalent credit quality.
3. Includes overnight liquidity
4. Weighted Average Maturity (WAM) is a portfolio's dollar weighted average maturity or exposure to interest rate risk (similar to duration) typically measured in days. For example, in calculating WAM, floating rate assets are measured to their next reset date and fixed rate assets are measured to their final maturity.
5. Allocations may be greater than 0% but round down to zero.

For more information

For additional information, including portfolio holdings, please contact your client relationship officer directly or visit us online at www.blackrock.com. A general description of the investment philosophy, risk management and guidelines criteria, as well as specific investment guidelines for short-term investment funds can be found in the Short Term Investment Funds Overview and Guidelines (the "STIF Guidelines"). A copy of the STIF Guidelines, which may be updated from time to time, may be accessed via the following website link: www.blackrockdocuments.com.

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LIFE AFTER ZERO

2014 MID-YEAR INVESTMENT OUTLOOK

JUNE 2014

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INVESTMENT
INSTITUTE

Life After Zero

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BlackRock's Global Chief Investment Strategist

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Chief Investment Officer, BlackRock International Fundamental Equity

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Head of BlackRock Emerging Markets Fixed Income

Tom Parker
Deputy Chief Investment Officer, BlackRock Model-Based Fixed Income

Risk assets are grinding higher and volatility is extraordinarily low. Nominal economic growth is subdued (but rising) and monetary stimulus still plentiful.

What are the implications of the first post-crisis divergence in central bank strategy? And what does life after zero (rates) look like? We debated this at a New York gathering in mid-June and updated our 2014 outlook ***Squeezing Out More Juice***. Our conclusions:

- Our overall views on markets are essentially unchanged. We again give our mainline scenario, *Low for Longer*, the highest probability for the second half. (See the next page for details.) This does not necessarily mean yesterday's winning trades will work again tomorrow; market leadership can change quickly.
- Valuations are becoming stretched across markets and investor complacency is high. Many asset owners hold similar investments: long credit, long momentum and short emerging markets (EM) risk. This sets markets up for more volatility—especially as the focus shifts from the end of U.S. quantitative easing (QE) to worries about the timing and magnitude of U.S. interest rate hikes.

3 KEY POINTS

1 GROWTH
We expect growth to tick up steadily but to remain below trend.

2 MARKETS
Many assets are pricey, but we do not think there is a market bubble (yet).

3 RISKS
The end of U.S. QE and anticipation of rate hikes are key risks.

- The biggest change over the past six months? A brewing crisis in emerging markets has stabilized. Many economies have adjusted and started closing current account deficits, setting the stage for an economic and market rebound. Selection is key, as countries develop at very different speeds.
- The U.S. Federal Reserve has stuck to the mantra of keeping rates low with great conviction—despite mounting evidence the U.S. economy is set to improve. The risk? When it shifts gears, markets are going to notice. Think steeper (and earlier) rate hikes than the market currently expects—but a lower peak federal funds rate than in previous cycles. Also watch out when QE ceases by year-end: The Fed's reduced bond buying still gobbles up an outsized portion of net debt issuance.
- The European Central Bank (ECB)'s resolve to prevent the eurozone from falling into a deflationary spiral is likely good news for European risk assets. Watch current account balances to gauge competitiveness and the ECB's maneuvering room to start an asset purchase program.
- We are bullish on Japanese equities—despite recent underperformance. Reasons include Godzilla-like QE by the Bank of Japan (BoJ), cheap valuations, structural reforms to boost economic growth, and a rise in domestic investor interest.
Expectations on China's GDP growth may edge down further. Its investment-fueled economic model is not sustainable. Structural reform is the only way out—but it may push down growth in the short term. Worries about a credit blowout look overdone.

The opinions expressed are as of June 2014 and may change as subsequent conditions vary.

2014 Scenarios

	IMBALANCES TIP OVER	LOW FOR LONGER	GROWTH BREAKOUT
DESCRIPTION	A downturn delivers zero nominal interest rates—but rising real ones. Markets sell off on (expectations of) a rate hike or an exogenous shock. Risk assets fall and volatility spikes. Safe-haven government bonds get a second life.	Real rates and overall volatility stay subdued. Momentum can easily propel equities higher. The hunt for yield intensifies. Low investor conviction in trades and lofty valuations leave little room for error.	Real rates move up gradually, driven by rising inflation expectations. This is mostly bad for bonds and mixed for stocks (growth trumps income). Cyclical assets (including commodities) should do well before rate fears kick in. Volatility rises.
PROBABILITY	16% (-4%)	57% (+2%)	27% (+2%)
WHAT'S NEW	▸ Markets have mostly ignored growing geopolitical risks such as the Ukraine standoff and Middle East sectarian strife. Which dog that is yapping now will become the one that actually bites? ▸ Ending ultra-low rates is tricky, and so is navigating increasing central bank policy divergence.	▸ *Low for Longer* has buoyed risk assets—but valuations are no longer cheap. Trades that worked in the past may not work in the future. ▸ Equity leadership is becoming fitful. Watch out for sharp reversals in internal market dynamics (small vs. large, growth vs. value).	▸ Be careful what you wish for. Faster growth is not necessarily good for equity prices. ▸ Rising rents look set to boost U.S. core CPI, magnifying a growing disconnect between Fed policy and market expectations. The market may do the tightening itself (ugly for bonds).

RISKS

DOWNSIDE	UPSIDE
▸ Valuations become over-extended. ▸ U.K. and U.S. rate expectations rise too fast. ▸ Deflation hits the eurozone.	▸ EM economies and asset prices rebound. ▸ Global growth beats (low) expectations. ▸ Companies switch from buybacks to capex.

SO WHAT DO I DO WITH MY MONEY?®

- We generally prefer equities over bonds, particularly in our *Low for Longer* base-case scenario.
- Equities are not cheap—but they are not (yet) in bubble territory. We favor Europe and Japan on valuation and asset-price-boosting central bank policies.
- Volatility is unnaturally low—and set to rise. Stock up on downside (and upside) protection while it is cheap.
- Many bonds look expensive and risky (especially government debt). Stick to select yield plays and relative-value investments.

See page 7 for detailed investment ideas. U.S. financial advisors: More insights in The List.

Investment strategies mentioned may not be suitable for all investors, depending on investor guidelines and market conditions at the time of investing.

Markets

Easy monetary policies by central banks have pushed down bond yields, encouraging risk taking and inflating asset valuations. Volatility is suppressed in equities, bonds and currencies.

Government bonds look particularly dear—and credit markets appear to be moving in the same direction. See the chart below. (Note: Corporate bonds would look a lot more expensive if measured on an absolute yield basis.) Dispersion in credit markets is unusually low, with a rising tide lifting all bonds. These markets have essentially become rate, not credit, plays.

The fall in yields has had many reaching for their history books. Spanish 10-year bond yields recently fell to their lowest levels since 1789, while French yields plumbed the lowest levels since 1746, according to Deutsche Bank. Equity valuations look more reasonable, particularly outside the United States.

Easy financial conditions are pushing asset owners into look-alike yield-seeking trades, as detailed in *A Disappearing Act* of May 2014. The longer monetary policy smothers volatility and underwrites heady valuations, the bigger the eventual recoil. Geopolitical risks bubbling to the surface add to the potential for volatility spikes. The market response to political crises is often Hobbesian: nasty, brutish and short.

BATTLE OF THE ACRONYMS: ZIRP VS. QE

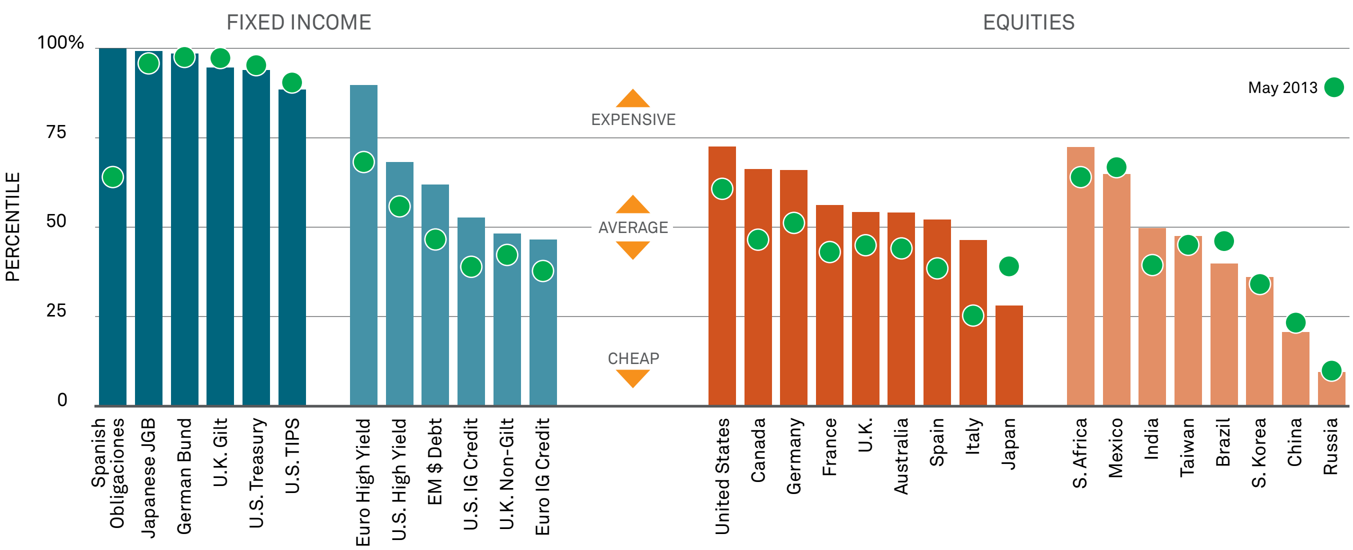
Many investors braced for rising rates and volatility as the Fed reduced its monthly bond buying. Why did the opposite happen? Markets have overemphasized the impact of QE—and underclubbed the importance of zero-interest-rate policy (ZIRP).

QE-created liquidity leaked beyond U.S. borders. This is why the Fed's signaling the end of bond buying was such a big deal in emerging markets. ZIRP is likely to stick around for a while if we take Fed Chair Janet Yellen at her word. What does this mean for volatility and markets?

- The anticipation of a ZIRP reversal could cause market angst on the timing and magnitude of future rate hikes. The result? A greater chance of (spikes in) volatility. Caveat: Cycles of low U.S. volatility (both interest rate as well as realized and implied equity market volatility) have tended to last until higher rates started to inhibit growth. Volatility and credit cycles have gone hand-in-hand, ending simultaneously when growth jitters led to a rise in expected defaults.
- Pricey asset markets, low dispersion of returns and lack of investment conviction are part of the ZIRP furniture. This is unlikely to change soon. The first rate hike in a major developed economy (likely the U.K.) will not necessarily upset this status quo. The trick will be to navigate the impact of divergence between the tighteners (Bank of England (BoE) and, eventually, the Fed) and looseners (BoJ and ECB).

IN SEARCH OF VALUE

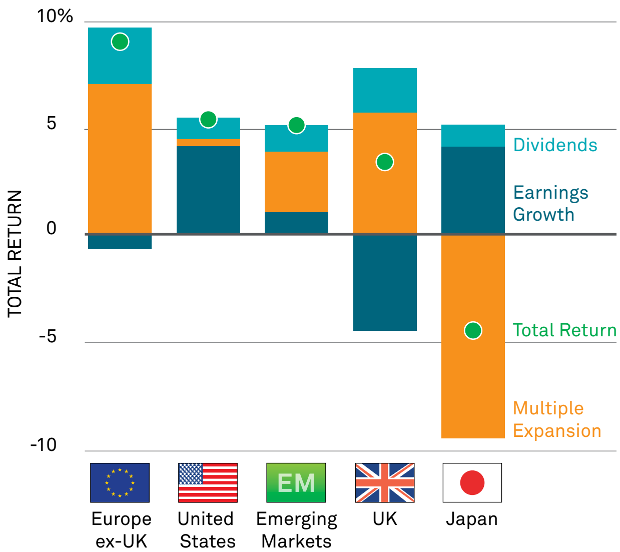
Asset Valuations by Percentile vs. Historic Norms, May 2014



Sources: BlackRock Investment Institute and Thomson Reuters, May 30, 2014. Notes: Valuation percentiles are based on an aggregation of standard valuation measures versus their long-term history. Government bonds are 10-year benchmark issues. Credit series are based on Barclays indexes and the spread over government bonds. Treasury Inflation Protected Securities (TIPS) are represented by nominal U.S. 10-year Treasuries minus inflation expectations. Equity valuations are based on MSCI indexes and are an average of percentile ranks versus available history of earnings yield, cyclically adjusted earnings yield, trend real earnings, dividend yield, price to book, price to cash flow and forward 12-month earnings yield. Historic ranges vary from 1969 (developed equities) to 1998 (TIPS).

SOURCING RETURNS

2014 Equity Returns by Source



Sources: BlackRock Investment Institute, MSCI and Thomson Reuters, June 2014.Notes: All returns are in local currency terms. Multiple expansion is represented by the change in the price-to-earnings ratio. Earnings growth is based on aggregate 12-month forward earnings forecasts. Index performance is shown for illustrative purposes only. It is not possible to invest directly in an index. Past performance is not indicative of future returns.

BUBBLING ALONG

The longer *Low for Longer* lasts, the more stretched valuations become as risk taking is rewarded. Equity markets are at risk of becoming disconnected from earnings growth. Multiple expansion (investors paying a higher price for the same level of earnings) drove gains in all major markets last year with the exception of Japan.

This factor has been behind gains in emerging markets, the eurozone and the U.K. this year, even as earnings shrank in the latter two. See the chart above. Japanese and U.S. equity returns have been underpinned by earnings growth, by contrast. Rising earnings may not translate into positive returns in the short term, but they are usually rewarded in the long run, as detailed in *Risk and Resilience* of September 2013.

Are we in a market bubble? We introduced a couple of "bubblemeters" this year: a high yield complacency gauge (see *A Disappearing Act*) and a U.S. market gauge that takes into account volatility and corporate leverage (see *Squeezing Out More Juice* of December 2013). The latter has crept higher over the past six months but is still short of pre-crisis highs.

In other words, we do not believe we are in a bubble—yet. We would get worried if we were to see leverage rise much further. In the meantime, brace for shifts in internal market dynamics (think the equity momentum reversal this spring).

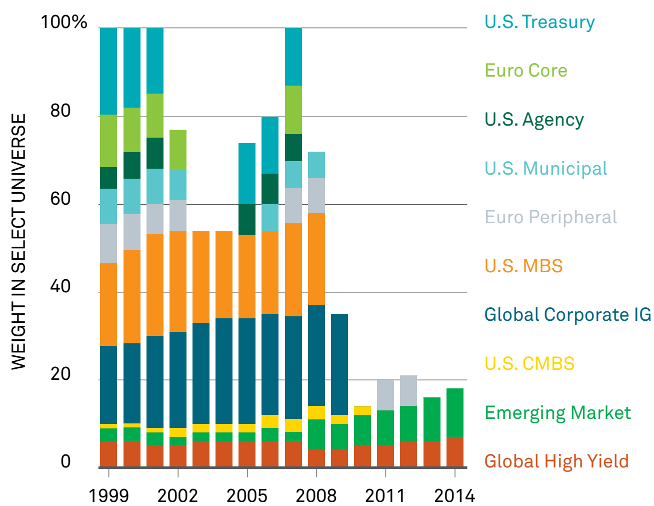
One complication: Market liquidity has lagged the pace of debt issuance. Prices could gap down in case of a wave of reallocations out of areas such as corporate bonds. Ravenous appetite for yield by long-term asset owners is a stabilizer. See *The Liquidity Challenge* of June 2014 for details.

Paltry yields pose a challenge for institutions with long-term liabilities. At the millennium, 10 major fixed income sectors yielded over 4%. Since 2011, just two have met this hurdle (high yield and EM debt). See the chart below. Asset owners need to take more risk just to keep standing still.

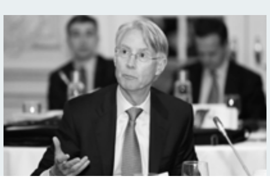
Low yields underpin equity valuations. Takeovers, corporate issuance and share buybacks have been booming. Debt holders essentially are subsidizing return-on-equity growth. This can last a long time. The problem: It makes equities as vulnerable as bonds to rising rates. It also means bond and equity correlations could rise, making diversification harder.

YIELDING LITTLE

Fixed Income Assets Yielding Over 4%, 1999–2014



Sources: BlackRock Investment Institute, Barclays and Thomson Reuters, June 2014. Notes: The bars show market capitalization weights of assets with an average annual yield over 4% in a select universe that represents about 70% of the Barclays Multiverse Bond Index. Euro core is based on French and German government debt indexes. Euro peripheral is an average of government debt indexes for Italy, Spain and Ireland. Emerging markets combine external and local currency debt.



"As a value investor, I love Japan." (June 2014)

— **Dennis Stattman**
Head of BlackRock's Global Allocation Team

Economies

The U.S. economy has been cruising below its speed limit for years, yet it could be on the verge of a cyclical pickup.

- **Housing:** This key sector's recovery has slowed but remains intact.
- **Fiscal:** The fiscal drag from spending cuts and tax hikes is fading this year—and is set to virtually disappear by 2015, according to Goldman Sachs.
- **Capex:** Goldman's "capex tracker" (which tracks 16 capital spending gauges) points to a near-term capex pickup.

What does this mean for U.S. monetary policy? The answer depends on how much slack there is in the economy. A recent rise in the long-term unemployed could point to structural factors like skills shortages. Yet the Fed appears to believe temporarily discouraged workers will come out of the woodwork once job openings rise. See our interactive *BlackRock Jobs Barometer* for key labor market trends around the world.

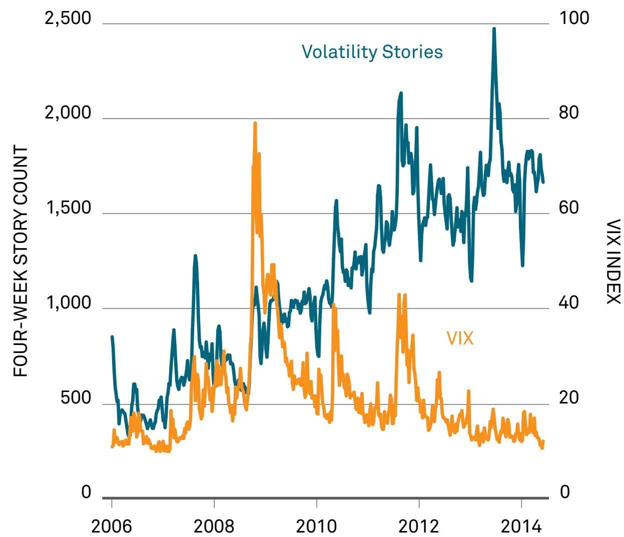
If U.S. unemployment has a structural component, faster growth could push up wages quickly. The Fed uses core personal consumption expenditures (PCE) as its preferred gauge of inflation, not the consumer price index (CPI). Core PCE has been lower than core CPI, primarily because it gives less weight to the "cost of shelter" such as rent (15% versus 33%). Our analysis suggests the usual spread of 50 basis points between the two could widen significantly given housing supply shortages. This could magnify a growing disconnect between the Fed's policy and market conditions (and expectations).

The bottom line: The Fed looks set to stick to its "low for longer" policy with great conviction—despite signs the economy is improving. Markets are going to take notice when the Fed shifts gears: Brace for steeper (and earlier) rate hikes than currently expected—but a lower peak federal funds rate than in previous cycles.

Could this awaken volatility from its long slumber? Cross-sectional volatility in the S&P 500 recently hit the lowest point in our quantitative guru's lifetime (he was born in July 1960). We are not the only ones worrying about this: Media chatter about volatility has risen as implied volatility limped toward record lows as well. See the chart on the top right.

MUCH ADO ABOUT NOTHING

VIX and Bloomberg Volatility Stories, 2006–2014



Sources: BlackRock Investment Institute and Bloomberg, June 2014.
Note: The blue line shows the four-week average of the number of Bloomberg stories mentioning the word "volatility."

EUROPE: LOW BAR

The bar is low for European growth to surprise on the upside. And asset values are supported by a (perhaps complacent) belief ECB President Mario Draghi is ready and able to do whatever it takes to preserve the monetary union and prevent the eurozone from going into a deflationary spiral.

The key is to watch current account balances. A turnaround in Spain's showed the economic adjustment Southern-tier nations made—and foreshadowed a rally in peripheral assets. A falling surplus in Germany could lead to renewed efforts by the ECB to push down the euro—and a "melt-up" in European equities. By contrast, the BoE has signaled it could hike rates sooner than markets expect.

JAPAN: ALL IN

Japanese equities have underperformed so far this year, yet we remain believers (in the hedged variety). Our reasoning includes an "all-in" BoJ flooding the market with liquidity, cheap valuations, structural reform efforts, and an asset allocation shift (fewer bonds, more equities) at the \$1.2 trillion Government Pension Investment Fund (GPIF). See *Rising Sun, Setting Sun* of March 2014 for details.

"This labor market is different. The Fed may be too dismissive of a structural component of unemployment." *(June 2014)*

— **Martin Hegarty**
Head of BlackRock's Inflation-linked Bond Portfolios in the Americas

CHINA AND EM: A BOUNCE BACK?

China's GDP growth expectations have fallen over the past years but could edge even lower. The country's investment-fueled growth is not sustainable, in our view. Reform is the only way out—but it may dampen growth in the short term. Can policymakers deliver on their long to-do list? A lot depends on China's export machine, which makes up a quarter of GDP. If exports hold up, the government has maneuvering room. Any downside surprises to export growth could cause the government to stall or even dial back reforms.

Angst about a credit blowout looks overdone. Absolute leverage is daunting but containable. We do worry about the torrid *growth* in credit, especially in the "shadow banking" system of (often unregulated) securitized corporate loans. There are good arguments to bank on a "Xi Jinping put," a belief China's leadership has the ammunition and determination to prevent any systemic financial market crisis. The outcome may be secure, but the journey is likely perilous.

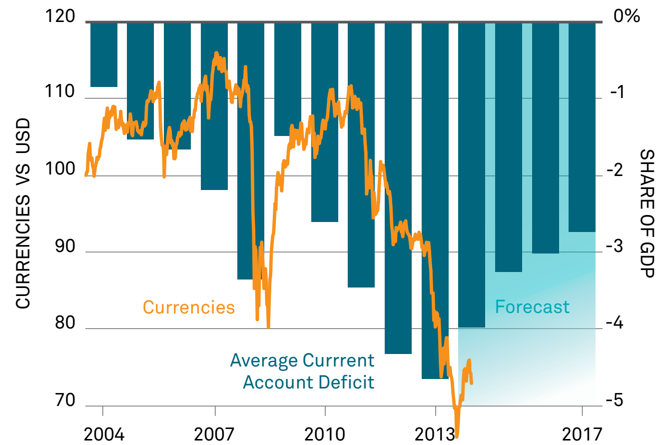
The property market may be Beijing's hardest nut to crack. Property makes up an outsized share of the economy. The challenge: Engineer a slowdown without hurting growth (too much).

EM growth and markets have been weak in recent years, setting the stage for a cyclical rebound over the next year. The currencies of the "Fragile Five" (Brazil, India, Indonesia, South Africa and Turkey) declined sharply as the market punished countries with large external deficits.

EM RE-EMERGENCE?

Click for interactive data

Fragile Five External Deficits and Currencies, 2004–2017

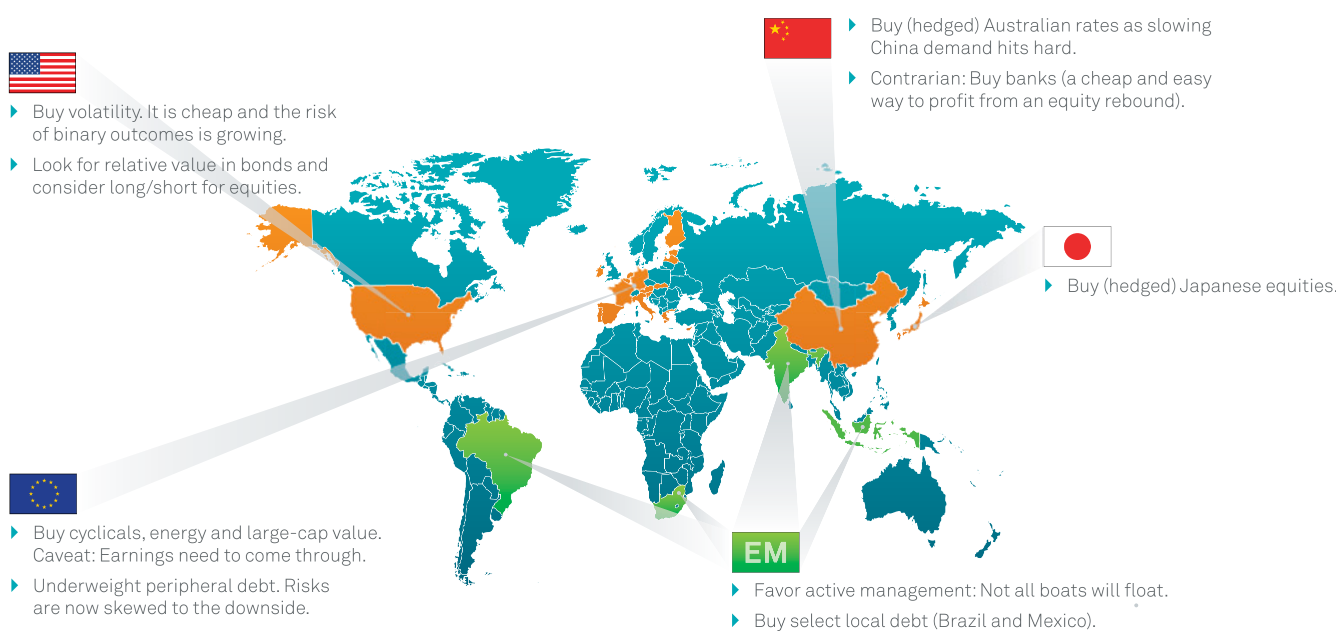


Sources: BlackRock Investment Institute, Oxford Economics and Thomson Reuters, June 2014. Note: The currencies line shows an equally weighted basket of spot rates vs the U.S. dollar for the Brazilian real, Indian rupee, Indonesian rupiah, South African rand and the Turkish lira (rebased to 100 in June 2004).

There are signs this bitter medicine may be making them more competitive again. Current account balances are forecast to recover. See the chart above. Divergence among EM countries is our main theme, and we favor countries with strong balance sheets that are implementing reforms to make their economies more competitive (think Mexico). See *Emerging Markets on Trial* of January 2014.

WORLDLY PICKS

BlackRock Investment Ideas for the Second Half of 2014



Source: BlackRock Investment Institute, June 2014.
Investment strategies mentioned may not be suitable for all investors, depending on investor guidelines and market conditions at the time of investing.

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