LACERS
LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM

Investment Committee Agenda

REGULAR MEETING	Chair: Sung Won Sohn
TUESDAY, APRIL 9, 2019	Committee Members: Elizabeth Lee Nilza R. Serrano
TIME: 10:30 A.M. OR IMMEDIATELY FOLLOWING ADJOURNMENT OF SPECIAL BOARD MEETING	Manager-Secretary: Neil M. Guglielmo
	Executive Assistant: Ani Ghoukassian
MEETING LOCATION:	Legal Counselor: City Attorney's Office Retirement Benefits Division
LACERS Ken Spiker Boardroom 202 West First Street, Suite 500 Los Angeles, CA 90012-4401	
Live Committee Meetings can be heard at: (213) 621-CITY (Metro), (818) 904-9450 (Valley), (310) 471-CITY (Westside), and (310) 547-CITY (San Pedro Area).	Sign Language Interpreters, Communication Access Real-Time Transcription, Assistive Listening Devices, or other auxiliary aids and/or services may be provided upon request. To ensure availability, you are advised to make your request at least 72 hours prior to the meeting you wish to attend. Due to difficulties in securing Sign Language Interpreters, five or more business days' notice is strongly recommended. For additional information, please contact: Board of Administration Office at (213) 473-7169.

I. PUBLIC COMMENTS ON MATTERS WITHIN THE COMMITTEE'S JURISDICTION

II. APPROVAL OF MINUTES FOR THE INVESTMENT COMMITTEE MEETING OF MARCH 12, 2019 AND POSSIBLE COMMITTEE ACTION

III. CHIEF INVESTMENT OFFICER VERBAL REPORT

IV. PRESENTATION BY PGIM, INC. REGARDING THE MANAGEMENT OF AN EMERGING MARKET DEBT PORTFOLIO

V. PRESENTATION BY PRINCIPAL GLOBAL INVESTORS, LLC REGARDING THE MANAGEMENT OF AN ACTIVE U.S. MID-CAP EQUITIES PORTFOLIO

VI. TACTICAL ASSET ALLOCATION PLAN AND POSSIBLE COMMITTEE ACTION

VII. CLOSED SESSION PURSUANT TO GOVERNMENT CODE SECTION 54956.81 TO CONSIDER THE TOWNSEND GROUP RECOMMENDATION FOR REAL ESTATE FUND INVESTMENT AND POSSIBLE COMMITTEE ACTION

VIII. OTHER BUSINESS

IX. NEXT MEETING: The next Regular Meeting of the Investment Committee is scheduled for Tuesday, May 14, 2019, in the LACERS Ken Spiker Boardroom, 202 West First Street, Suite 500, Los Angeles, CA 90012-4401.

X. ADJOURNMENT

LACERS
LOS ANGELES CITY EMPLOYEES'
RETIREMENT SYSTEM

Board of Administration Agenda

SPECIAL MEETING **TUESDAY, APRIL 9, 2019** **TIME: 10:30 A.M. OR IMMEDIATELY FOLLOWING ADJOURNMENT OF SPECIAL BOARD MEETING** **MEETING LOCATION:** LACERS Ken Spiker Boardroom 202 West First Street, Suite 500 Los Angeles, CA 90012-4401 Live Committee Meetings can be heard at: (213) 621-CITY (Metro), (818) 904-9450 (Valley), (310) 471-CITY (Westside), and (310) 547-CITY (San Pedro Area).	President: Cynthia M. Ruiz Vice President: Elizabeth L. Greenwood Commissioners: Elizabeth Lee Sandra Lee Nilza R. Serrano Sung Won Sohn Michael R. Wilkinson Manager-Secretary: Neil M. Guglielmo Executive Assistant: Ani Ghoukassian Legal Counsel: City Attorney's Office Retirement Benefits Division Sign Language Interpreters, Communication Access Real-Time Transcription, Assistive Listening Devices, or other auxiliary aids and/or services may be provided upon request. To ensure availability, you are advised to make your request at least 72 hours prior to the meeting you wish to attend. Due to difficulties in securing Sign Language Interpreters, five or more business days' notice is strongly recommended. For additional information, please contact: Board of Administration Office at (213) 473-7169.

I. PUBLIC COMMENTS ON MATTERS WITHIN THE COMMITTEE'S JURISDICTION

II. APPROVAL OF MINUTES FOR THE INVESTMENT COMMITTEE MEETING OF MARCH 12, 2019 AND POSSIBLE COMMITTEE ACTION

III. CHIEF INVESTMENT OFFICER VERBAL REPORT

IV. PRESENTATION BY PGIM, INC. REGARDING THE MANAGEMENT OF AN EMERGING MARKET DEBT PORTFOLIO

V. PRESENTATION BY PRINCIPAL GLOBAL INVESTORS, LLC REGARDING THE MANAGEMENT OF AN ACTIVE U.S. MID-CAP EQUITIES PORTFOLIO

VI. TACTICAL ASSET ALLOCATION PLAN AND POSSIBLE COMMITTEE ACTION

VII. CLOSED SESSION PURSUANT TO GOVERNMENT CODE SECTION 54956.81 TO CONSIDER THE TOWNSEND GROUP RECOMMENDATION FOR REAL ESTATE FUND INVESTMENT AND POSSIBLE COMMITTEE ACTION

VIII. OTHER BUSINESS

IX. NEXT MEETING: The next Regular Meeting of the Investment Committee is scheduled for Tuesday, May 14, 2019, in the LACERS Ken Spiker Boardroom, 202 West First Street, Suite 500, Los Angeles, CA 90012-4401.

X. ADJOURNMENT

MINUTES OF THE REGULAR MEETING
INVESTMENT COMMITTEE
BOARD OF ADMINISTRATION
LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM

LACERS Ken Spiker Boardroom
202 West First Street, Suite 500
Los Angeles, California

March 12, 2019

1:22 p.m.

Agenda of: Apr. 9, 2019

Item No: II

PRESENT:	Chair:		Sung Won Sohn
	Committee Members:		Nilza R. Serrano
	Manager-Secretary:		Neil M. Guglielmo
	Executive Assistant:		Ani Ghoukassian
	Legal Counselor:	(left at 1:35 p.m.)	Anya Freedman
		(arrived at 1:35 p.m.)	James Napier
	Absent:		Elizabeth Lee

The Items in the Minutes are numbered to correspond with the Agenda.

I

PUBLIC COMMENTS ON MATTERS WITHIN THE COMMITTEE'S JURISDICTION – Chair Sohn asked if any persons wished to speak on matters within the Committee's jurisdiction, to which there was no response and no public comment cards received.

II

APPROVAL OF MINUTES FOR THE INVESTMENT COMMITTEE MEETING OF FEBRUARY 12, 2019 AND POSSIBLE COMMITTEE ACTION – A Motion to approve the minutes of February 12, 2019 was moved by Committee Member Serrano, and adopted by the following vote: Ayes, Committee Member Serrano and Chair Sohn –2; Nays, None.

III

CHIEF INVESTMENT OFFICER VERBAL REPORT – Rod June, Chief Investment Officer, shared the 12-month Investment Committee Calendar with the Investment Committee. Mr. June also stated that the list of semi-finalists of the Private Credit Investment Manager Search will be presented to the Committee today and if they approve, staff will then conduct due diligence and bring forward to the Committee the firms that should advance as finalists. Future agenda items include several manager presentations and the Tactical Asset Allocation Plan.

IV

SEMI-FINALISTS OF THE PRIVATE CREDIT INVESTMENT MANAGER SEARCH AND POSSIBLE COMMITTEE ACTION – Jimmy Wang, Investment Officer I and Carolyn Smith with NEPC presented this item to the Committee. Committee Member Serrano moved approval, and adopted by the following vote: Ayes, Committee Member Serrano and Chair Sohn –2; Nays, None.

V

REAL ESTATE FISCAL YEAR 2019-20 STRATEGIC PLAN AND POSSIBLE COMMITTEE ACTION – Jennifer Stevens, Partner and Storm Klyve-Underkofler, Investment Analyst with Townsend Group presented this item to the Committee. Committee Member Serrano moved approval, and adopted by the following vote: Ayes, Committee Member Serrano and Chair Sohn –2; Nays, None.

Chair Sohn adjourned the Regular Meeting at 2:47 p.m. to convene in closed session.

VI

CLOSED SESSION PURSUANT TO GOVERNMENT CODE SECTION 54956.81 TO CONSIDER SALE OF ONE PARTICULAR, SPECIFIC PENSION FUND INVESTMENT AND POSSIBLE COMMITTEE /BOARD ACTION

Chair Sohn reconvened the Regular Meeting at 2:56 p.m.

VII

OTHER BUSINESS – There was no other business.

VIII

NEXT MEETING – The next Regular Meeting of the Investment Committee is scheduled for Tuesday, April 9, 2019, in the LACERS Ken Spiker Boardroom, 202 West First Street, Suite 500, Los Angeles, CA 90012-4401.

IX

ADJOURNMENT – There being no further business before the Committee, Chair Sohn adjourned the Meeting at 2:57 p.m.

Sung Won Sohn
Chair

Neil M. Guglielmo
Manager-Secretary

Los Angeles City Employees' Retirement System

Report to Investment Committee—Emerging Market Debt Portfolio Review

April 9, 2019

PGIM FIXED INCOME

Presenter Biographies

Cathy L. Hepworth, CFA, is a Managing Director and Co-Head of PGIM Fixed Income's Emerging Markets Debt Team. Ms. Hepworth co-founded the Firm's emerging markets debt management effort with David Bessey in 1995. Previously, Ms. Hepworth was an analyst in the credit unit group of the Firm’s Capital Management Group, focusing on various sovereign, financial and corporate sectors. Prior to joining the Firm in 1989, she held analyst positions at Bankers Trust, Merrill Lynch, and Golembe Associates. Ms. Hepworth received a BSFS from Georgetown University, School of Foreign Service. She holds the Chartered Financial Analyst (CFA) designation.

Peter Taggart is Principal, Client Advisory for PGIM Fixed Income. Mr. Taggart works with our largest institutional investors in developing fixed income solutions to meet their needs. Mr. Taggart has more than 20 years of experience in the investment management business, structuring and managing portfolios for U.S. and international institutions. Prior to joining PGIM Fixed Income in 2002, Mr. Taggart was Executive Director of Marketing with WestAM. Previously, Mr. Taggart was Managing Director with Forstmann-Leff, where he was responsible for marketing equity, fixed income and private equity investment services to institutions. Prior to Forstmann-Leff, Mr. Taggart was with Salomon Brothers Asset Management for nine years, in both bond portfolio management and client relations positions and at First Boston Asset Management, where he was a bond Portfolio Manager. Mr. Taggart received a BA in Computer Science from Colgate University.

For purposes of the biographies, the “Firm” is defined as Prudential Financial, Inc. ("PFI"). All PGIM and Prudential named entities are subsidiaries or affiliates of Prudential Financial, Inc. Prudential Financial, Inc. of the United States is not affiliated with Prudential plc, headquartered in the United Kingdom.

Table of Contents

1 Organization

2 Investment Process

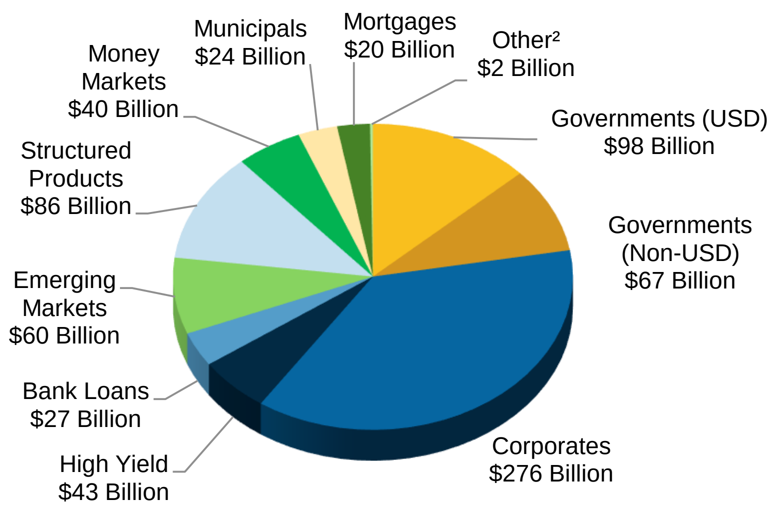
3 Performance, Attribution, & Positioning

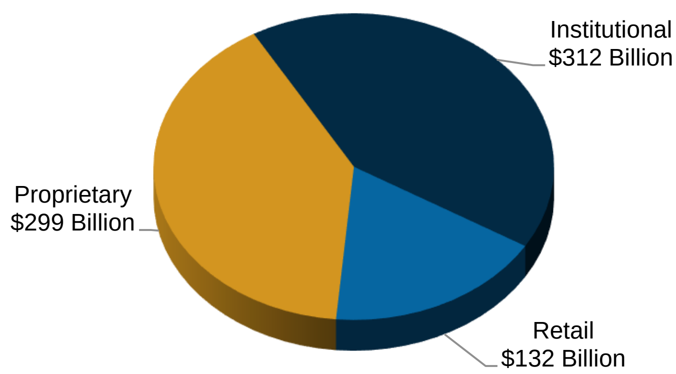
4 Market Review & Outlook

5 Reference

1 Organization

$743 Billion in Assets Under Management[1]





One Of The Largest Fixed Income Managers[3]

- Manage a broad range of active, global fixed income mandates for 651 clients worldwide[4]
  - 35 Fortune 100 companies[5]
  - 31 of the 100 largest Global Pension Funds[6]
  - 13 Sovereign Wealth Funds/Central Banks
- Headquartered in U.S. (Newark, NJ) with offices in London, Amsterdam, Tokyo, and Singapore[7]
- 286 investment professionals worldwide[8]

Assets under management (AUM) are based on company estimates and are subject to change. PGIM Fixed Income's AUM includes the following businesses: (i) the public fixed income unit within PGIM Limited, located in London; (ii) locally managed assets of PGIM Japan Co., Ltd. ("PGIM Japan"), located in Tokyo; and (iii) the public fixed income unit within PGIM (Singapore) Pte. Ltd., located in Singapore. [1]Assets for PGIM Fixed Income as of December 31, 2018. Asset class breakdown based on company estimates and is subject to change. [2]Other includes Japanese equities and Japanese real estate equities. [3]Source: Pensions & Investments, May 29, 2018, based on U.S. institutional tax-exempt assets under management as of December 31, 2017. [4]As of December 31, 2018. [5]As of December 31, 2018. Source of Fortune 500 list: Fortune issued June 9, 2018. [6]As of December 31, 2018. Source of Global Pension Fund data: P&I/Willis Towers Watson Top 300 Pension Funds ranking, data as of December 31, 2017, published September 2018. [7]Affiliate offices of PGIM Fixed Income. [8]Staffing as of December 31, 2018

2 Investment Process

We Believe….

A long-term investment perspective contributes to strong long-term performance

- Our deep credit, macroeconomic and investment resources allow us to establish long-term views of opportunities within hard, local and FX emerging markets within and across countries
- Typically, we do not actively sell on bad news—trading is expensive and once news is released it is priced in for all managers, regardless of size

High confidence, contrarian investing can capture attractive, undervalued opportunities when consistent with long-term investment views

- When other market participants are selling, we utilize our deep investment resources to build high conviction positions at attractive entry points

The “barbell” can capture the upside while minimizing the downside

- We invest in higher yielding securities in short term tenors with an eye toward holding to maturity
- We complement those investments with less volatile, high conviction, higher quality relative value positions in longer tenors

Diversification and conviction win in the long term

- Emerging markets debt securities can be volatile—we believe holding overly concentrated positions is sub-optimal
- We believe a key to long-term success in emerging markets is to establish highly diversified portfolios with the largest investments in our highest relative value convictions

Why PGIM for Emerging Markets Debt

What Makes Us Different

1 **Strong Track Record since 1996 from Diversified Sources of Alpha**

- Dedicated emerging markets strategies in hard and local currency sovereign, blend, and corporates
- Investing in local markets since 2003

2 **A Well Resourced Investment Management Team with Extensive Experience and Tenure**

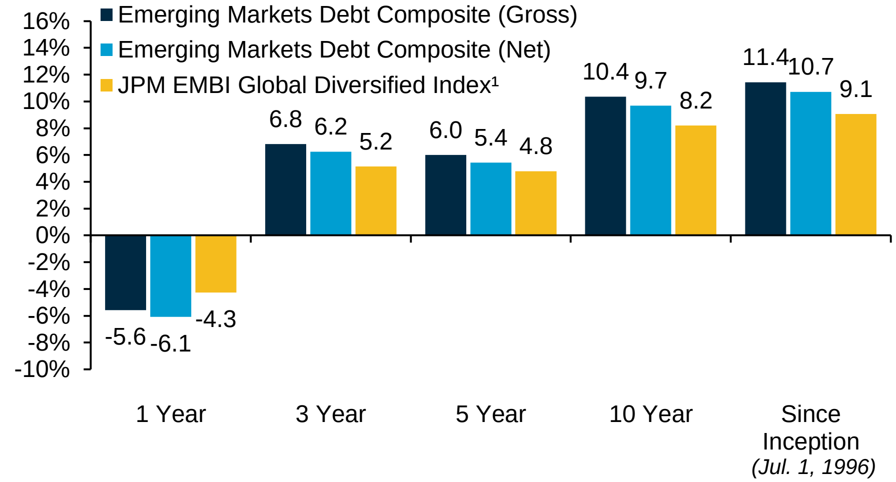
- 31 specialists in portfolio management, economics/sovereign analysts, and corporate credit provide ability to nimbly extract alpha from numerous sources
- Senior members started PGIM's emerging markets effort in 1995
- Proprietary sovereign analysis incorporates ESG assessments

3 **A Deep Culture of Risk Management, Quantitative Research, and Bottom Up Credit Research**

- Independent risk management/quantitative research team of 52
- Extensive credit research team of 87

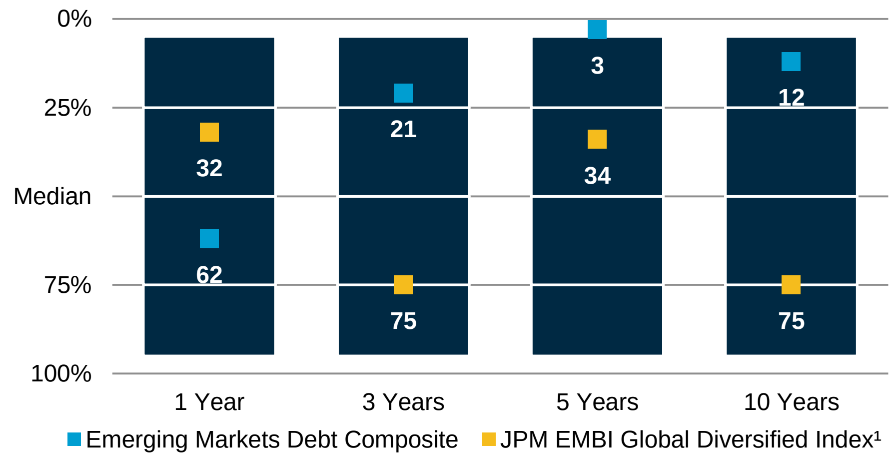
Long-Standing Hard Currency Track Record

Annualized Returns (USD) as of December 31, 2018



Long-Standing Hard Currency Track Record

eVestment Emerging Markets Fixed Income – Hard Currency Universe Gross Return Rankings vs. Peers[2] as of December 31, 2018



Past performance is not a guarantee or a reliable indicator of future results. Please see the Reference section for important disclosures, including risk, net returns and benchmark descriptions. *The value of investments can go down as well as up. Where overseas investments are held the rate of currency exchange may cause the value of investments to fluctuate. If applicable, investments in emerging markets are by their nature higher risk and potentially more volatile than those inherent in some established markets and non-USD securities are converted to USD using a spot rate conversion. All return periods longer than one year are annualized. Source: PGIM Fixed Income. Source of benchmark: JP Morgan. Staff as of December 31, 2018. Information has been obtained from sources believed to be reliable but J.P. Morgan does not warrant its completeness or accuracy. The Index is used with permission. The Index may not be copied, used, or distributed without J.P. Morgan's prior written approval. Copyright 2019, J.P. Morgan Chase & Co. All rights reserved.*
[1]The benchmark represents the JPM EMBI+ Index from July 1, 1996 – February 28, 2006 and the JPM EMBI Global Diversified Index going forward. [2]Supplemental information. Source of Peer Performance Data: eVestment Emerging Mkts Fixed Income – Hard Currency Universe: Global Emerging Markets Fixed Income products that invest in bonds that are issued and denominated in a "Hard" or "External" currency such as USD, EUR, or GBP. Common benchmarks include the JPM EMBI Global Diversified, JPM EMBI Global, and JPM EMBI+.

Attribution Highlights Diversified Alpha Sources

Sources of Alpha

For the Representative Emerging Markets Debt Portfolio (Gross) vs. Benchmark[1]
As of December 31, 2018

Contribution (bps)	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006
Country Selection	**-98**	**+127**	**+203**	**+143**	**-88**	**+66**	**+346**	**-54**	**+187**	**+670**	**-340**	**-40**	**+144**
Security Selection	**+40**	**+254**	**+73**	**-76**	**+127**	**+25**	**+207**	**-47**	**+67**	**+488**	**-200**	**+86**	**+106**
Hard Currency Selection	+36	+239	+48	-25	+191	-89	+122	+68	-5	+286	-7	+30	+39
Local Currency Selection	+1	+11	-4	-3	-14	+13	-1	-39	+11	+94	+14	+108	+50
Corporates Selection	+2	+4	+29	-47	-51	+101	+85	-76	+61	+108	-207	-52	+17
Currency Selection	**-49**	**+29**	**-55**	**+111**	**+87**	**+3**	**+110**	**-9**	**+45**	**+18**	**-43**	**+92**	**+27**
Total Alpha	**-107**	**+410**	**+221**	**+179**	**+126**	**+93**	**+663**	**-110**	**+298**	**+1,177**	**-582**	**+138**	**+277**

Commodity Price Shock
Major Drivers 2014 Performance

• Overweight NEXGEM countries including Ivory Coast, Sri Lanka, Pakistan, and Argentina	+25 bps
• Barbell of short maturity, lower - rated positions and long maturity, higher-rated positions	+191 bps
• Overweight oil-related corporates	-51 bps
• Long USD vs. EMFX	+87 bps

Taper Tantrum
Major Drivers 2013 Performance

• Overweight in higher yielding lower-rated countries	+66 bps
• Overweight in long maturity bonds in investment grade countries	-89 bps
• Overweight EM corporates	+101 bps
• These positions continued to work well in 2014	

European Debt Crisis
Major Drivers 2011 Performance

• Overweight in lower quality countries during risk aversion	-54 bps
• Overweight EM corporates	-76 bps
• All losses were temporary and recouped in subsequent year	

U.S. Financial Crisis
Major Drivers 2008 Performance

• Underweight high quality treasury-sensitive countries	-151 bps
• Overweight Ivory Coast, debt restructuring postponed	-149 bps
• Overweight EM corporates	-207 bps
• All losses were temporary and recouped in subsequent year	

Past performance is not a guarantee or a reliable indicator of future results. Please see the Reference section for important disclosures, including risk, net returns and benchmark descriptions. *The value of investments can go down as well as up. Where overseas investments are held the rate of currency exchange may cause the value of investments to fluctuate. If applicable, investments in emerging markets are by their nature higher risk and potentially more volatile than those inherent in some established markets and non-USD securities are converted to USD using a spot rate conversion. All return periods longer than one year are annualized. Source of benchmark: JPMorgan. Supplemental information. The table above compares performance of the Emerging Markets Debt representative portfolio relative to its benchmark. Attribution shown above is based on gross returns. Gross return attributions do not take into consideration attributions to management fees or other relevant expenses. Totals may not sum due to rounding. The benchmark for this Strategy was the JPM EMBI+ from July 1, 1996 to February 28, 2006 and the JPM EMBI Global Diversified Index from March 1, 2006 to the present. Information has been obtained from sources believed to be reliable but J.P. Morgan does not warrant its completeness or accuracy. The Index is used with permission. The Index may not be copied, used, or distributed without J.P. Morgan's prior written approval. Copyright 2019, J.P. Morgan Chase & Co. All rights reserved. [1]The benchmark for the representative portfolio was the JPM EMBI+ from July 1, 1996 to August 31, 2006 and the JPM EMBI Global Diversified Index from September 1, 2006 to the present.*

Experienced and Stable Team

- Investment team averages 14 years with the firm
- Investment team averages 17 years investment experience
- Approach leverages full resources of the firm

Senior Portfolio Managers

David Bessey
Co-Head of Emerging Markets Debt
29 yrs Investment Experience

Cathy Hepworth, CFA
Co-Head of Emerging Markets Debt and Portfolio Manager, LATAM
33 yrs Investment Experience

U.S. Portfolio Management

Johnny Mak — *Portfolio Manager, Asia; 19 yrs inv exp.*

Todd Petersen — *Portfolio Manager, EMEA; 14 yrs inv exp.*

Pradeep Kumar, PhD, CFA — *Portfolio Manager, Local Rates/FX; 22 yrs inv exp.*

Mariusz Banasiak, CFA — *Head of FX Senior Portfolio Manager; 14 yrs inv exp.*

Aayush Sonthalia, CFA — *Portfolio Manager, EM Corporates; 19 yrs inv exp.*

Eric Giza — *Portfolio Manager, EMD; 11 yrs inv exp.*

Matthew Duda, CFA — *Portfolio Manager, LATAM; 26 yrs inv exp.*

Matthew Angelucci, CFA — *Portfolio Manager, Global Rates; 14 yrs inv exp.*

David Dichiacchio — *Portfolio Manager and Trader, FX; 6 yrs inv exp.*

Markus Zehnder — *Trader, FX; 19 yrs inv exp.*

Monika Patel — *Trader, FX; 4 yrs inv exp*

Zan Huang PhD, CFA — *Quantitative Strategist, Rates and FX; 8 yrs inv exp.*

Mani Sabapathi, CFA, FSA — *Portfolio Manager, Asset Selection; 25 yrs inv exp.*

UK Portfolio Management

Mark Thurgood[2] — *Portfolio Manager, EM Hard Currency; 20 yrs inv exp.*

TBD — *Trader, Local Rates/FX*

Global Macroeconomic Research & Investment Strategy

U.S.

Nathan Sheets, PhD — *Chief Economist and Head of Global Macroeconomic Research; 25 yrs inv exp.*

Robert Tipp, CFA — *Chief Inv. Strategist, and Head of Global Bonds; 35 yrs inv exp.*

Kishlaya Pathak, CFA — *Investment Strategist; 19 yrs inv exp.*

Mehill Marku — *Investment Strategist; 20 yrs inv exp.*

Jurgen Odenius, PhD — *Economic Counselor and Lead Economist, Europe; 25 yrs inv exp.*

U.S.

Ellen Gaske, PhD, CFA — *Lead Economist , G10; 30 yrs inv exp.*

Gerwin Bell, PhD — *Lead Economist, Asia; 27 yrs inv exp.*

Francisco Campos-Ortiz, PhD — *Lead Economist, LATAM; 7 yrs inv exp*

UK

Giancarlo Perasso[2] — *Lead Economist , CEEMEA; 32 yrs inv exp.*

Emerging Market Corporate Debt Research

U.S.

Nick Ivanov, CFA[1] — *Head of Emerging Markets Debt Corporate Bond Research; 25 yrs inv exp.*

Elizabeth Gunning, CFA — Analyst, EMEA/LATAM Corporates; *19 yrs inv exp.*

Omari Douglas-Hall — Analyst, EMEA/LATAM Corporates; *9 yrs inv exp.*

Michael Pettit, CFA — Analyst, EMEA/LATAM Corporates; *7 yrs inv exp.*

Singapore

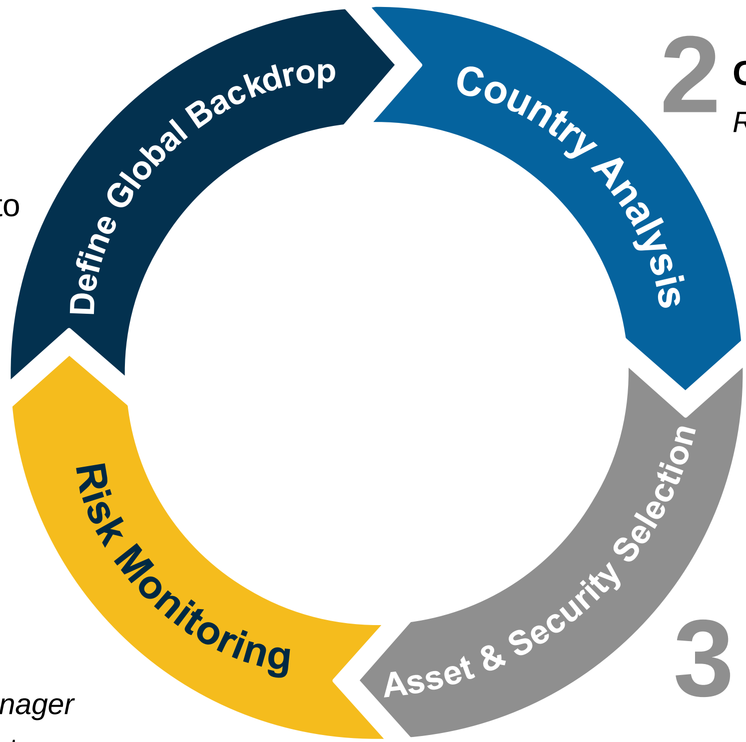
Juan Otero, CFA[3] — *Portfolio Manager/Analyst, Asian Corporates; 13 yrs inv exp.*

TBD — *Portfolio Manager/Analyst, Asian Corporates*

Yanru Chen[3] — *Analyst, Asian Corporates; 13 yrs inv exp.*

Staff as of February 2019. Staff years as of December 31, 2018. [1]Member of PGIM Fixed Income's credit research group. [2]European Team members are employees of an indirect subsidiary of PGIM, Inc., who have been providing services to PGIM Limited, a UK subsidiary that is authorized and regulated by the Financial Conduct Authority. [3]Employee of a wholly-owned subsidiary of PGIM, Inc., PGIM (Singapore) Pte. Ltd.

A Disciplined Approach



1 Global Backdrop & Portfolio Strategy

Senior Portfolio Manager

- Assess global risk appetite to determine portfolio risk profile and refine portfolio positioning, leveraging firm's resources

2 Country Analysis

Regional Economists

- Develop comprehensive economic outlook by country
- Evaluate each country from quantitative and qualitative perspective and assign an internal rating

3 Asset & Security Selection

Regional Portfolio Managers/Economists/Analysts

- Seek to determine best risk/reward opportunities across markets: hard currency, local rates, and FX
- Use proprietary tools to highlight relative value opportunities within markets

4 Risk Monitoring

Senior Portfolio Manager/Risk Manager

- Employ a rigorous process to tightly monitor risk at all levels
- Use proprietary tools to verify performance achieved is appropriate for risk taken

Determining Portfolio Risk Profile And Positioning

Define Current Global Backdrop

Economic Indicators
- Global Macro Outlook/Commodity Price Trends/Global Liquidity Outlook

Valuations In Other Markets
- Emerging Market Equities/High Yield and BBB Spreads/Currencies

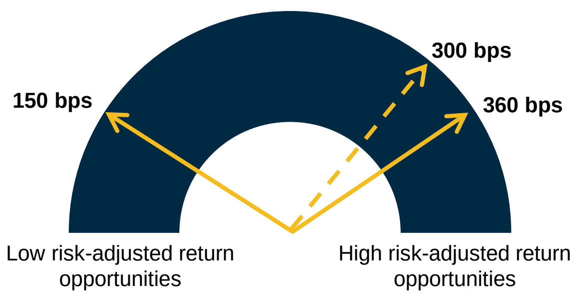
Technical Factors
- Cash Levels, Positioning, Flows/ Seasonal Trends/Local Market Color

Evaluate Risk Positions Weekly in Context of Global View and Refine Tracking Error

Strategy	Rate Risk	Currency Risk	Spread Risk
Hard	16 bps	33 bps	101 bps

- Detailed summary of changes to portfolio
- Client-specific risk allocation

Typical Tracking Error Range



As of December 31, 2018. For illustrative purposes only. There can be no guarantee that this target will be met.

Internal Country Rating Assigned

	Internal Rating	Average Agency Rating	Difference in Notches
South Korea	AA-	AA	-1
Czech Republic	AA-	AA-	0
Chile	BBB	A+	-4
Malaysia	BBB	A	-3
Mexico	BBB	A-	-2
China	BBB	AA-	-5
Israel	A-	AA-	-3
Peru	BBB	A-	-2
Poland	A-	A-	0
Romania	BBB+	BBB	+1
Thailand	BBB	A-	-2
Colombia	BBB-	BBB+	-2
Philippines	BBB	BBB+	-1
Hungary	BBB+	BBB	+1
Russia	BBB	BBB-	+1
Indonesia	BBB-	BBB	-1
Brazil	BB	BB	0
Turkey	B+	BB+	-3
India	BB+	BBB	-2
South Africa	BB	BB+	-1
Argentina	B+	B+	0
Venezuela	SD	CC	-1
Ukraine	B	B	0

= Example of Internal Rating Higher than Average (green)

= Example of Internal Rating Lower than Average (yellow)

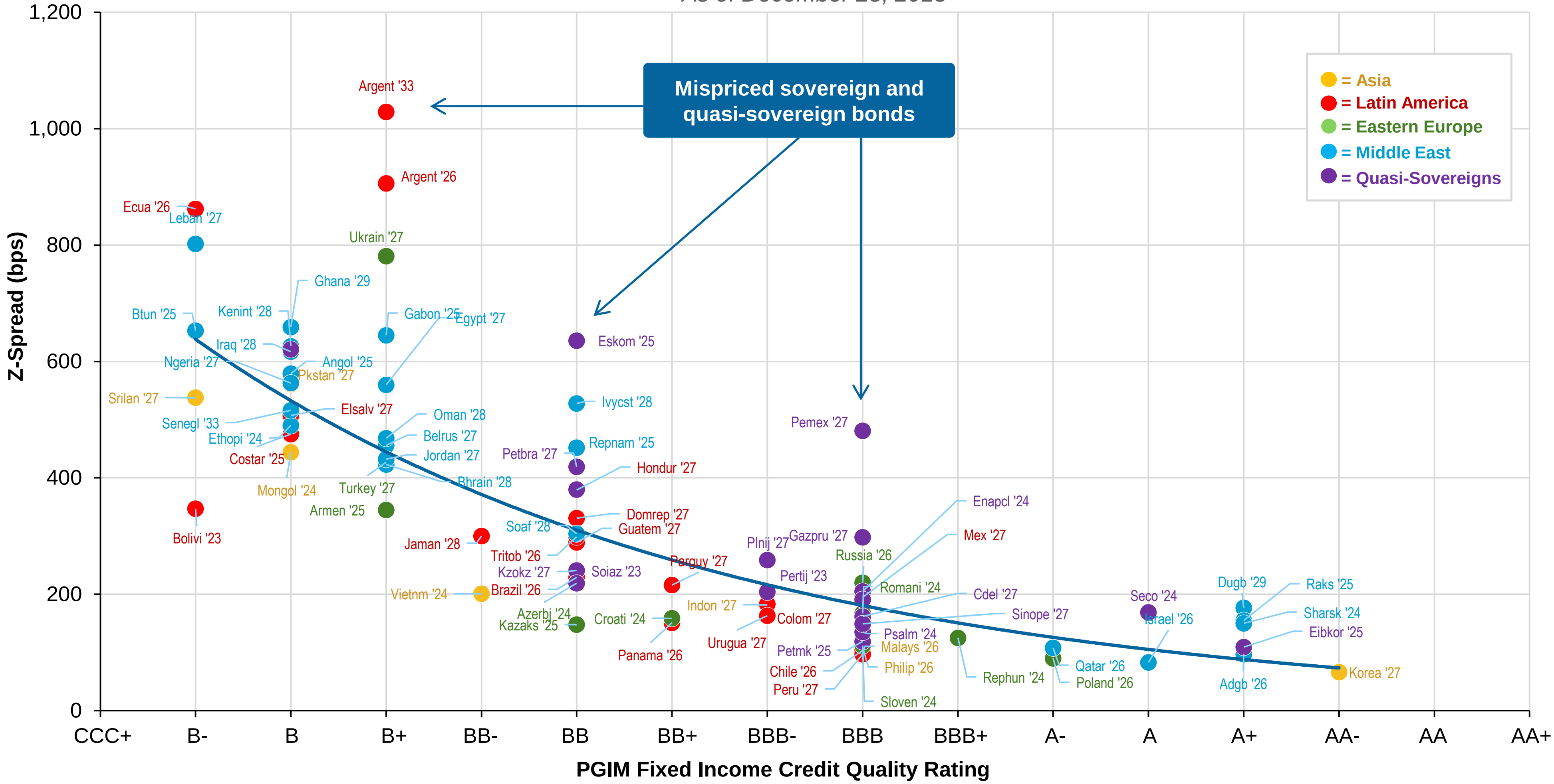
Internal rating used to determine value and capture conviction of country view

As of May 2018. Source: PGIM Fixed Income. Provided for discussion purposes solely as an illustration of our country evaluation process Does not constitute a recommendation regarding the merits of investing in securities of any of the issuers referenced therein or a complete listing of issuers analysed. Does not constitute a recommendation regarding the merits of any investments. Does not constitute investment advice and should not be used as the basis of any investment decision. Does not constitute a representation that PGIM Fixed Income would purchase any securities of the countries referenced or that an investment in any securities of such countries would be profitable. There can be no assurance that the matrix will be effective in evaluating countries or that opportunities identified within the matrix can be effectively implemented.

Select Sovereigns that Reflect Country Views and Offer Best Relative Value

Spread vs. Credit Quality

As of December 28, 2018

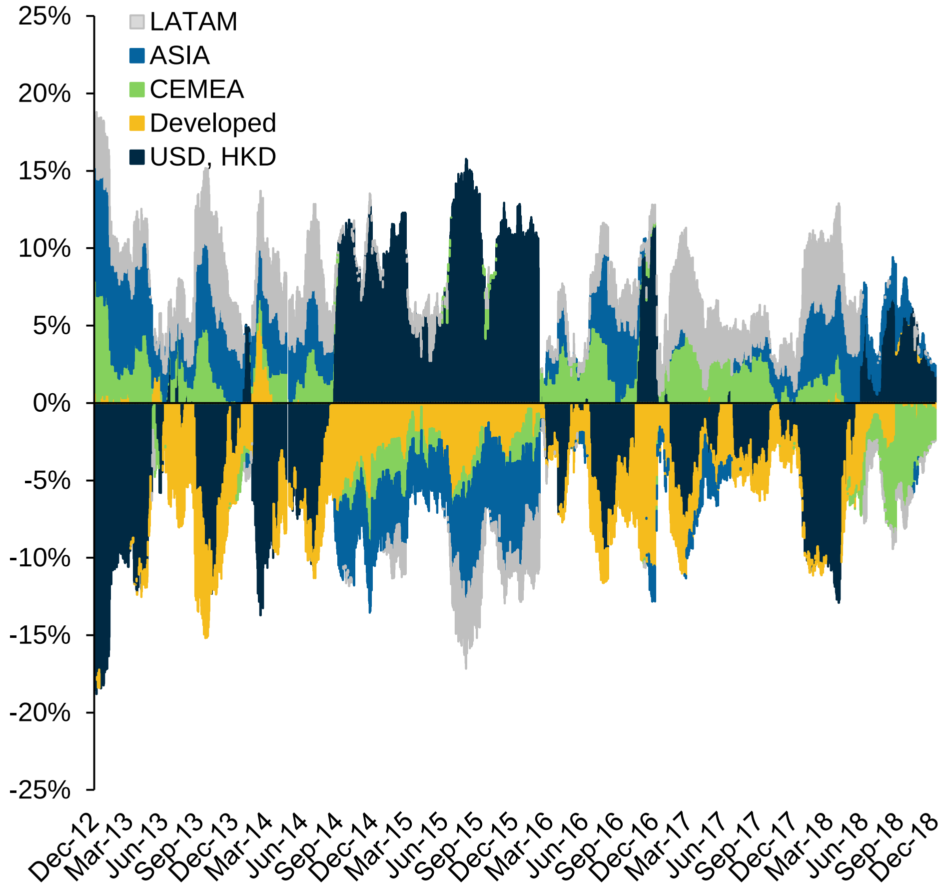


Source: PGIM Fixed Income. Z-Spreads represent normalized yields in the 10-year tenor (where available) and are as of December 31, 2018. Source: Bloomberg. Ratings are shown in S&P comparative format and are as of December 2018. Provided for discussion purposes solely as an illustration of our issuer evaluation process and of the output of PGIM Fixed Income's proprietary models. Does not constitute a recommendation regarding the merits of investing in the securities of any of the issuers referenced. The sample model output provided above may not be representative of PGIM Fixed Income's current views regarding the issuers discussed, does not constitute investment advice, and should not be used as the basis for any investment decision. Does not constitute a representation that PGIM Fixed Income has purchased or would purchase any securities of the issuers referenced or that an investment in any securities of such issuers would be profitable. An investment cannot be made in a model. There can be no assurance that the model will be effective in evaluating issuers or securities or that opportunities identified by the model can be effectively implemented.

Fundamentals & Technicals Drive FX Positions

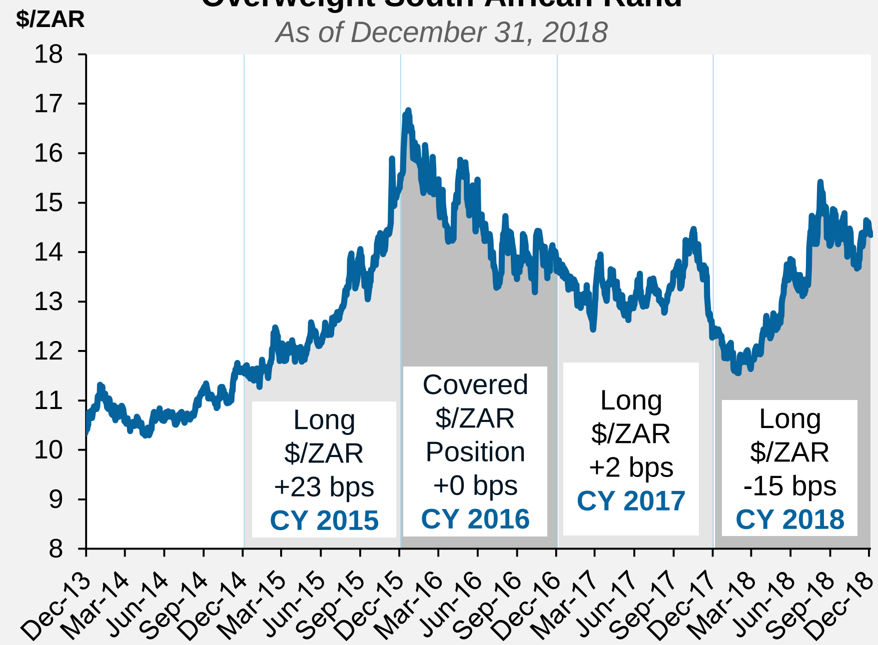
FX Liquidity Allows Active Positioning Within Portfolio

Representative Portfolio as of December 31, 2018



Foreign Exchange Trade Example—
Overweight South African Rand

As of December 31, 2018



Rationale

- Structural imbalances and terms of trade improving
- Conflicting political power interests continue to exist—political volatility will be low until Zuma's term ends next December
- REER very cheap, trade balance nearly in balance, current account deficit vastly improved, and high carry with inflation topping out

Source: PGIM Fixed Income. Supplemental information. The chart above compares characteristics of the representative portfolio within the Emerging Markets Debt Composite relative its benchmark. Representative portfolio foreign exchange exposure is subject to change and may not represent current or future portfolio composition. Actual results may vary for each client due to specific client guidelines and other factors. Shown for illustrative purposes only. Does not constitute a recommendation regarding the merits of any investments. Does not constitute investment advice and should not be used as the basis of any investment decision. Does not constitute a representation that PGIM Fixed Income has purchased or would purchase any of the investments referenced or that any such investments would be profitable. Please see the Reference section for important disclosures.

Rigorous Risk Budgeting Is Key To Optimal Portfolio Construction

- Focuses risk in areas that we believe offer the highest potential reward
- Helps establish a diversified set of strategies
- Seeks to limit non-systematic “tail” risk from idiosyncratic positions

Sample Emerging Markets Hard Currency Risk Budget

Tracking Error Threshold: 300 bps[1]

Curve/Currency/Spread 265 bps	
Systematic Risk Thresholds[2]	
Rate Risk	**70 bps**
Currency Risk	**110 bps**
Spread Risk	**250 bps**

Country/Industry/Issuer 141 bps	
Non-Systematic “Tail” Risk Thresholds[3]	
Country Stress Exposure:	200 bps
Liquidity Stress Exposure:	212 bps
Industry Stress Exposure:	105 bps
Corporate Issuer Exposure:[4]	
BBB *(%MV)*	2.5%
BB *(%MV)*	2.0%
B *(%MV)*	1.5%

Please see the Reference section for important disclosures regarding the information contained herein. *For illustrative purposes only. Note that the risk thresholds shown here are intended as a basis for discussion between the risk management and portfolio management teams. They are not intended to be absolute limits in a portfolio. All risk thresholds are subject to change. There can be no guarantee that this objective will be achieved. Please see the Reference section for important disclosures regarding the information contained herein.*

1. *Total tracking error is less than the sum of the systematic and non-systematic tracking error because these two major sources of tracking error tend to diversify with each other, thus lowering total tracking error:* $\sqrt{265^2 + 141^2} = 300$
2. *Under most market conditions, returns associated with these market risk factors tend to undergo small and independent day-to-day fluctuations, implying that mean and variance measures explain most of the distribution of returns therefore we manage these risks via tracking error measures.*
3. *These risk factors generally carry substantial skew or tail risk. Because returns from these items are not adequately described by mean and variance, we supplement tracking error measures with country and industry stress tests and issuer risk thresholds to monitor and manage the tail risk.*
4. *Issuer exposure is based on market implied ratings.*

Daily Monitoring of Exposure by Asset Type

Representative Hard Currency Portfolio

As of December 31, 2018

	TOTAL HARD CURRENCY			LOCAL CURRENCY			FX		
Country	Hard Curr % MV Gap	Active Duration Contrib (years)	Spread Risk (bps)	Local Curr % MV Gap	Active Duration Contrib (years)	Rates Risk (bps)	Ccy	FX Exposure % MV Gap	FX Risk (bps)
Argentina	2.6	0.12	(26.2)	-	-	-	ARS	0.2	(1.2)
Barbados	-	-	-	-	-	-			
Belize	0.0	0.00	-	-	-	-			
Bolivia	-0.4	(0.02)	2.5	-	-	-			
Brazil	1.1	0.09	(24.1)	-	-	(0.1)	BRL	0.7	(6.9)
Chile	-2.0	(0.13)	6.3	-	-	0.1	CLP	(1.3)	10.1
Colombia	-1.3	(0.08)	5.2	0.0	0.00	(0.2)	COP	(0.1)	0.5
Costa Rica	0.2	0.02	(1.0)	-	-	-			
Dominican Republic	0.1	0.02	(2.6)	-	-	-	DOP		
Ecuador	0.7	0.01	(1.8)	-	-	-			
El Salvador	1.0	0.03	(2.3)	-	-	-			
Guatemala	-0.1	(0.00)	0.2	-	-	-			
Honduras	0.3	0.01	(1.5)	-	-	-			
Jamaica	0.4	(0.00)	(0.5)	-	-	-			
Mexico	0.7	0.07	(12.2)	0.0	0.00	-	MXN	0.1	(0.6)
Panama	-1.4	(0.13)	11.4	-	-	-			
Paraguay	-0.5	(0.04)	3.6	-	-	-			
Peru	-1.0	(0.08)	7.5	0.1	0.01	(0.4)	PEN	0.4	(1.7)
Suriname	0.0	(0.00)	0.1	-	-	-			
Trinidad and Tobago	0.1	(0.02)	0.6	-	-	-			
Uruguay	-1.3	(0.14)	15.4	-	-	-	UYU		-
Venezuela	0.4	-	0.8	-	-	-			
LATIN AMERICAN BLOC	**-0.1**	**(0.27)**	**(18.6)**	**0.1**	**0.01**	**(0.6)**		**(0.0)**	**0.2**
China	-2.4	(0.07)	1.5	-	-	-	CNY	(2.1)	4.6
Hong Kong	-0.2	(0.01)		-	-	-	HKD		
Taiwan				-	-	-	TWD	0.3	(0.7)
India	-0.1	0.01	(4.4)	-	-	-	INR	1.4	(7.6)
Indonesia	1.8	0.15	(22.2)	-	-	0.1	IDR	(0.4)	1.8
Malaysia	-1.3	(0.07)	1.0	-	-	-	MYR	0.0	-
Mongolia	0.5	0.01	(2.1)	-	-	-			
Pakistan	1.1	0.03	(2.1)	-	-	-	PKR		
Philippines	-2.6	(0.19)	15.6	-	-	(0.2)	PHP	1.8	(6.6)
Singapore	-	-	-	-	-	-	SGD	0.3	(1.4)
South Korea	-	-	-	-	-	-	KRW	(1.0)	6.2
Sri Lanka	0.3	0.01	(0.7)	-	-	-			
Thailand	-	-	-	-	-	-	THB	0.4	(1.3)
Vietnam	0.0	(0.00)	0.2	-	-	-	VND		
ASIAN BLOC	**-2.9**	**(0.13)**	**(13.2)**	**-**	**-**	**(0.1)**		**0.7**	**(5.0)**
TOTAL	**-1.0**	**0.09**	**(87.9)**	**0.13**	**0.01**	**(4.9)**		**0.24**	**25.4**

__Please see the Reference section for important disclosures including risk, net returns and benchmark descriptions.__ Source: PGIM Fixed Income. The above table compares characteristics of the representative portfolio within the Emerging Markets Debt Composite relative to its benchmark. Provided for discussion purposes solely as an illustration of PGIM Fixed Income's risk management and reporting process. Does not constitute a recommendation regarding the merits of investing in any of the issuers or securities referenced. The information provided may not be representative of PGIM Fixed Income's current views regarding the issuers or securities referenced, does not constitute investment advice, and should not be used as the basis for any investment decision.

3 Performance, Attribution, & Positioning

Los Angeles City Employees' Retirement System

Investment Performance
As of February 28, 2019

	2018	YTD 2/19	Annualized 1 Year	2 Year	3 Year	Since Inception[1]
Portfolio (Gross)	-4.55	5.43	2.48	4.00	7.48	5.08
Portfolio (Net)	-4.94	5.36	2.07	3.58	7.03	4.61
Benchmark[2]	-4.26	5.45	3.05	2.74	6.43	4.47
Benchmark[2] (Ex CCC)	-4.02	5.10	3.15	3.02	6.07	4.48
Increment Gross(bps)	**-29**	**-2**	**-58**	**+126**	**105**	**61**
Increment Net (bps)	**-68**	**-9**	**-99**	**+84**	**60**	**14**
Increment Ex CCC (Gross) (bps)	**-53**	**33**	**-67**	**+98**	**141**	**60**
Increment Ex CCC(Net) (bps)	**-92**	**26**	**-108**	**+56**	**96**	**13**

= Attribution to Follow

Source of portfolio returns: PGIM Fixed Income. Performance shown gross of fees. Performance reported in USD.
Past performance is not a reliable indicator of future performance. Performance over one-year is annualized.
1. Inception Date: July 01, 2014
2. Benchmark: JP Morgan Emerging Markets Bond Index Global Diversified. Source of Benchmark: JP Morgan.
Please see Notice for important disclosures regarding the information contained herein.

Current Market Environment—Putting It Into Perspective

- Since 1994, there have been 15 Emerging Markets sell-offs of 5% or more.
- In most cases, the market has recovered all losses within a matter of months.

EM Hard Currency Selloff and Recoveries

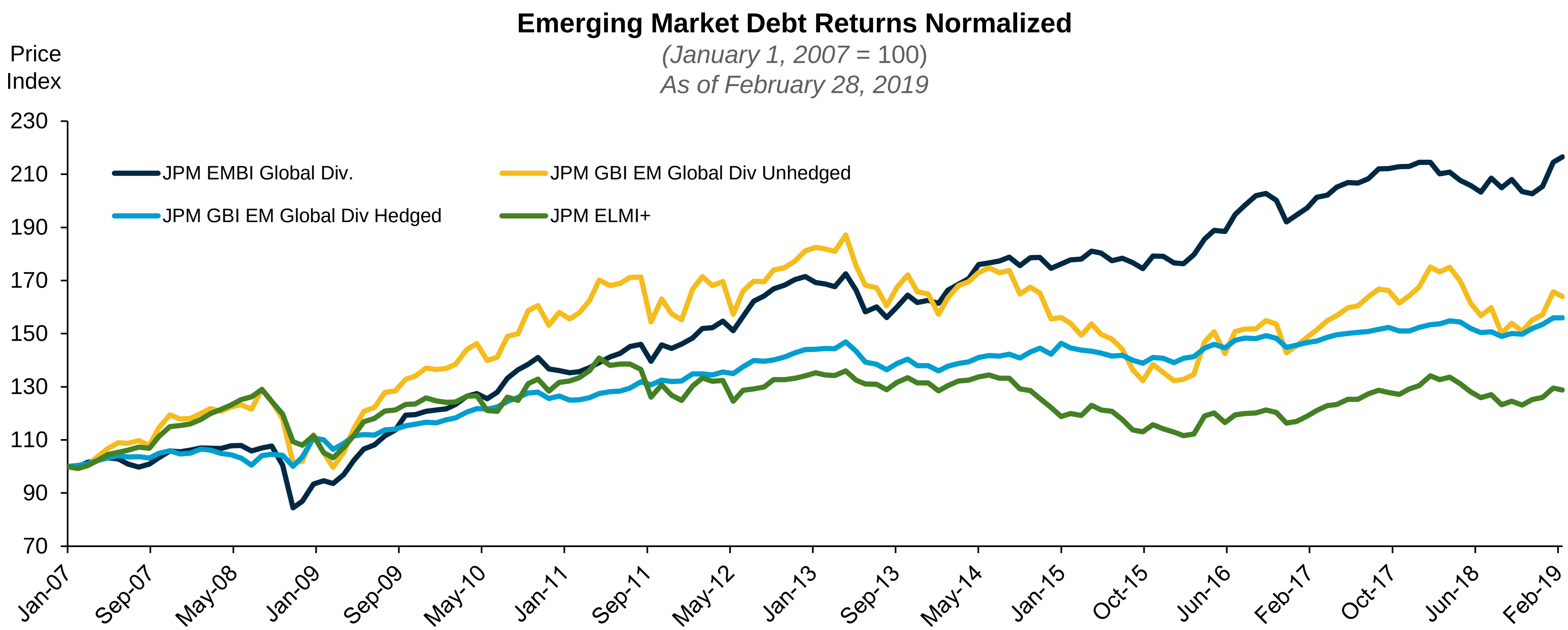
As of February 28, 2019

Defining Event	Year	Peak to Trough Index Return	Recovery Time	Bounce Back from Trough: Subsequent 6 Month Return	Bounce Back from Trough: Subsequent 12 Month Return
Fed and USD Concerns	2018	-7.0%	3 Months	N/A	N/A
U.S. Election “Shock”	2016	-6.5%	6 Months	8.2%	12.6%
Commodity Related Selloff	2014	-5.7%	3 Months	4.8%	4.5%
Fed Taper	2013	-11.4%	11 Months	5.8%	14.6%[1]
Eurozone Crisis	2011	-5.6%	2 Months	9.4%	21.5%
Credit Crisis	2007-2008	-29.2%	9 months	33.8%	57.2%
Risk Reduction	2004	-9.1%	5 months	15.4%	24.2%
Fed Concerns	2003	-6.7%	4 months	11.0%	12.4%
Brazil Elections	2002	-6.3%	7 months	13.0%	31.0%
Argentine Crisis	2001	-5.9%	2 months	9.1%	10.8%
Profit Taking	2000	-6.6%	3 months	9.1%	19.0%
Russia Default	1998	-29.4%	13 months	26.3%	35.0%
Korea Crisis	1997	-10.6%	6 months	12.3%	-5.0%
Profit Taking	1996	-8.4%	2 months	21.5%	41.0%
Mexico Crisis	1994	-26.5%	23 months	13.3%	4.0%

Past performance is not a guarantee or reliable indicator of future results. Please see the Reference section for important disclosures. *The value of investments can go down as well as up. Source: JP Morgan Emerging Markets Global Diversified Index. J.P. Morgan index information has been obtained from sources believed to be reliable but J.P. Morgan does not warrant its completeness or accuracy. The Index is used with permission. The Index may not be copied, used, or distributed without J.P. Morgan's prior written approval.* *An investment cannot be made directly in an index. [1]Return from trough on October 14, 2013 to January 31, 2015.*

Emerging Markets Debt—Performance

Strong Initial Bounce in 2019 has Paused For Now



Emerging Market Debt Returns (Annual)

Index	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	YTD 2018 (2/28/19)
EM FX	-3.85%	11.69%	5.68%	-5.19%	7.45%	-2.04%	-7.03%	-7.61%	3.54%	11.54%	-3.33%	2.21%
Hard Currency Sovereigns	-12.03%	29.82%	12.24%	7.35%	17.44%	-5.25%	7.43%	1.18%	10.15%	10.26%	-4.26%	5.45%
Hedged Local Currency Sovereigns	5.38%	5.20%	8.62%	4.49%	8.94%	-4.19%	3.15%	-2.24%	4.70%	4.63%	0.75%	1.60%
Hard Currency Corporates	-15.86%	34.88%	13.08%	2.32%	15.01%	-0.60%	4.96%	1.30%	9.65%	7.96%	7.96%	3.83%

Current Fixed Income Yields

Index	Yield (as of 2/28/19)
Hard Currency Sovereigns	6.15%
Local Currency Sovereigns (Unhedged)	6.25%
Global Aggregate Index	1.96%

Past performance is not a guarantee or reliable indicator of future results. Please see the Reference section for important disclosures. *The value of investments can go down as well as up. Where overseas investments are held the rate of currency exchange may cause the value of investments to fluctuate. If applicable, investments in emerging markets are by their nature higher risk and more volatile than those inherent in some established markets and non-USD securities are converted to USD using spot rate conversion. All returns longer than one year are annualized. Source of all charts: Bloomberg. An investment cannot be made directly in an index. J.P. Morgan index information has been obtained from sources believed to be reliable but J.P. Morgan does not warrant its completeness or accuracy. The Index is used with permission. The Index may not be copied, used, or distributed without J.P. Morgan's prior written approval.*

Different Market Environments Provide Different Opportunities

- Divergence of annual performance makes case for active sector rotation
- Annual returns in excess of 10% are not uncommon

Emerging Markets Debt Annual Returns

Annual Returns (US$ Terms)

January 2003–February 2019

Year	Hard Currency EMD	Local Currency EMD	Difference
YTD 2019 (2/28/19)	5.45	4.30	1.15
2018	-4.26	-6.21	1.95
2017	10.26	15.21	-4.95
2016	10.15	9.94	0.21
2015	1.18	-14.92	16.1
2014	7.43	-5.72	13.15
2013	-5.25	-8.98	3.73
2012	17.44	16.76	0.68
2011	7.35	-1.75	9.1
2010	12.24	15.68	-3.44
2009	29.82	21.98	7.84
2008	-12.03	-5.22	-6.81
2007	6.15	18.12	-11.97
2006	9.86	15.22	-5.36
2005	10.25	6.27	3.98
2004	11.62	22.97	-11.35
2003	22.21	16.92	5.29
Number Years with Returns Greater than 10%	**8 of 15**	**8 of 15**	

= Hard Currency EMD Outperforms

= Local Currency EMD Outperforms

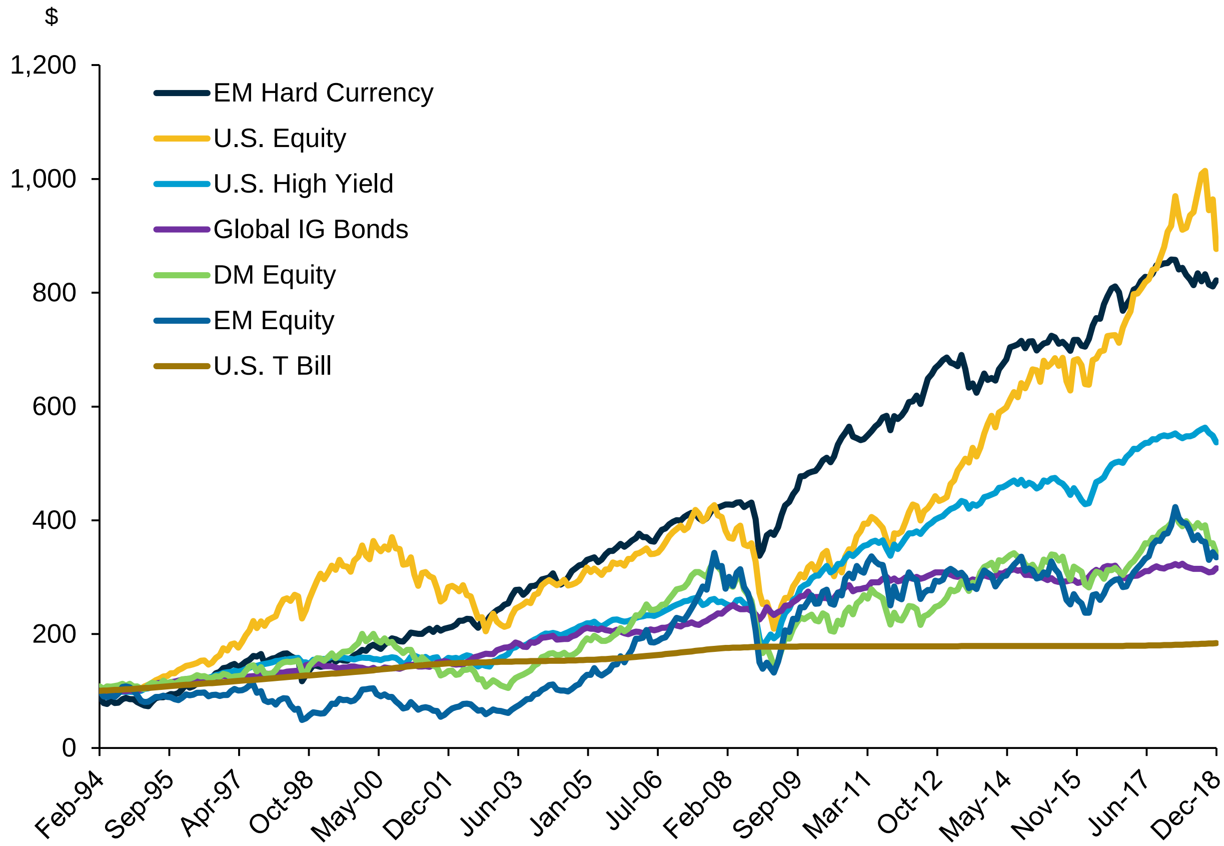
= Returns Greater than 10%

Past performance is not a guarantee or reliable indicator of future results. Please see the Reference section for important disclosures. *The value of investments can go down as well as up. Where overseas investments are held the rate of currency exchange may cause the value of investments to fluctuate. If applicable, investments in emerging markets are by their nature higher risk and more volatile than those inherent in some established markets and non-USD securities are converted to USD using spot rate conversion. All return periods longer than one year are annualized. As of February 28, 2019. Hard currency EMD represents the JPM EMBI Global Diversified Index. Local Currency EMD represents the JPM GBI-EM Global Diversified Index (Unhedged in USD). You cannot invest directly in an index.*

Strong EM Performance over Long Term with Moderate Volatility

Asset Class Returns

Growth of $100 from February 28, 1994 to December 31, 2018



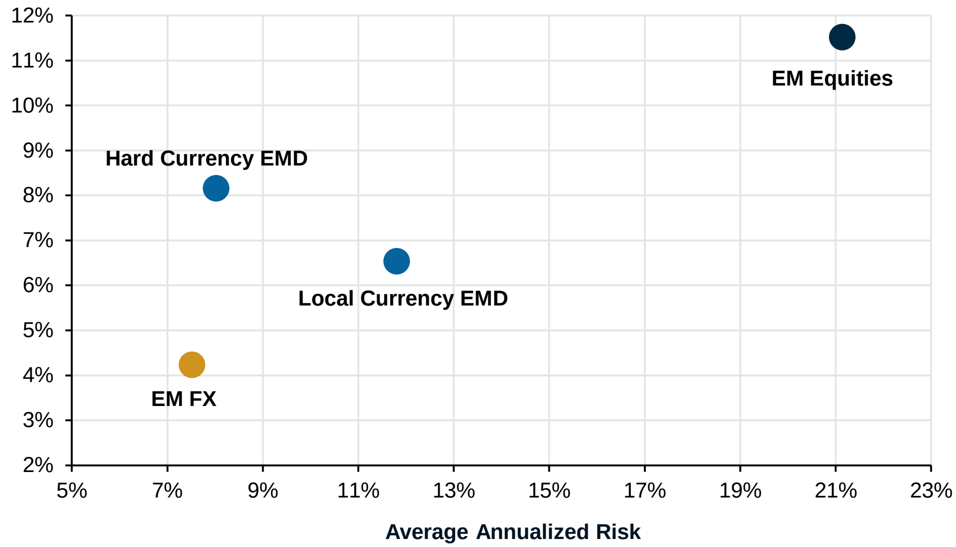
	Annualized Returns	Standard Deviation	Sharpe Ratio
U.S. Equity *(S&P 500)*	9.1	14.5	0.46
EM Hard Currency *(JPM EMBI Global Diversified)*	8.8	11.6	0.55
U.S. High Yield *(ICE BofAML US High Yield Index)*	7.0	8.3	0.54
DM Equity *(MSCI EAFE)*	5.0	15.9	0.16
EM Equity *(MSCI EM)*	5.0	22.3	0.11
Global IG Bonds *(Bloomberg Barclays Global Aggregate)*	4.7	5.4	0.42
U.S. T Bill	2.5	0.6	--

Past performance is not a guarantee or a reliable indicator of future results. Please see the Reference section for important disclosures, including risk, net returns, and benchmark descriptions. *The value of investments can go down as well as up. Where overseas investments are held the rate of currency exchange may cause the value of investments to fluctuate. If applicable, investments in emerging markets are by their nature higher risk and potentially more volatile than those inherent in some established markets and non-USD securities are converted to USD using a spot rate conversion. All return periods longer than one year are annualized. Source of chart: PGIM Fixed Income. Source of indices: JPM EMBI Global Diversified, J.P. Morgan; S&P 500 and 3-Month LIBOR, Bloomberg; Bloomberg Barclays Global Aggregate, Bloomberg Barclays; ICE BofAML US High Yield Index, BofA Merrill Lynch; MSCI EAFE Equity and MSCI EM Equity, Morgan Stanley. Information has been obtained from sources believed to be reliable but J.P. Morgan does not warrant its completeness or accuracy. The Index is used with permission. The Index may not be copied, used, or distributed without J.P. Morgan's prior written approval.* *An investment cannot be made directly in an index.*

On a Risk Adjusted Basis, Emerging Markets Debt is More Attractive than Equities

Risk and Return of Emerging Markets Investments Since the Inception of Emerging Markets Debt Local Currency Market

January 2003–September 2018



	Hard Currency EMD	Local Currency EMD	EM FX	EM Equities
Return[1]	8.16%	6.54%	4.23%	11.51%
Risk[1]	8.02%	11.81%	7.52%	21.14%
Sharpe Ratio[1]	**0.86**	**0.45**	**0.40**	**0.49**

Past performance is not a guarantee or a reliable indicator of future results. Please see the Reference section for important disclosures, including risk, net returns, and benchmark descriptions. *The value of investments can go down as well as up. Where overseas investments are held the rate of currency exchange may cause the value of investments to fluctuate. If applicable, investments in emerging markets are by their nature higher risk and potentially more volatile than those inherent in some established markets and non-USD securities are converted to USD using a spot rate conversion. All return periods longer than one year are annualized. As of September 30, 2018. Hard currency EMD represents the JPM EMBI Global Diversified Index. Local Currency EMD represents the JPM GBI-EM Global Diversified Index (Unhedged in USD). EM FX represents the JPM ELMI+ Index. EM Equities represents the MSCI EM Equity Index. [1]As of September 30, 2018.*

Attractive Long-Term Diversification Characteristics

10 Year Correlations of Hard Currency Emerging Market Bond Returns (JPM EMBI Global Diversified) with Other Asset Classes

As of September 30, 2018

	EM Hard Currency[1]	EM Local[2]	EM Corporate[3]	Merrill DM High Yield[4]	EM FX[5]	EM Equity[6]	U.S. Equity[7]	DM Equity[8]
EM Hard Currency[1]	100%							
EM Local[2]	74%	100%						
EM Corporate[3]	92%	61%	100%					
Merrill DM High Yield[4]	77%	45%	79%	100%				
EM FX[5]	70%	56%	65%	68%	100%			
EM Equity[6]	71%	50%	72%	80%	84%	100%		
U.S. Equity[7]	56%	34%	59%	75%	64%	78%	100%	
DM Equity[8]	68%	46%	69%	82%	78%	88%	88%	100%

Source of indexes: EMBI Global Diversified and ELMI+, JPMorgan; S&P 500, Bloomberg; Bloomberg Barclays U.S. High Yield, Bloomberg Barclays; MSCI EM Equity, Morgan Stanley. Past performance is not a guarantee or a reliable indicator of future results. An investment can not be made directly in an index. Please see the Reference section for index descriptions. Information has been obtained from sources believed to be reliable but J.P. Morgan does not warrant its completeness or accuracy. The Index is used with permission. The Index may not be copied, used, or distributed without J.P. Morgan's prior written approval. Copyright 2019, J.P. Morgan Chase & Co. All rights reserved. [1]JPM EMBI Global Diversified. [2]JPM GBI EM Global Diversified Index. [3]JPM CEMBI Broad Diversified Index. [4]Merrill Developed Markets High Yield Index. [5]JPM ELMI+ Index. [6]MSCI Emerging Markets Index. [7]S&P 500 Index. [8]MSCI EAFE DM Equity Index.

Los Angeles City Employees' Retirement System

Performance Attribution

Full Year 2018

Attribution Commentary

Country Selection

- Overweights to Brazil, Qatar, Bahrain and Saudi Arabia drove performance. Venezuela was volatile and underperformed due to the uncertainty behind the potential regime change and the continued deterioration of the economic situation. An overweight to Argentina along with underweights to Poland, China, Philippines and Lithuania offset some of these gains. Argentine assets struggled as the confidence crises intensified. Efforts to front-load the IMF financing, and a more articulate explanation by the Macri government about how they will implement the program will help stabilize the situation.

Security Selection

- Sovereign positioning in Lebanon, Sri Lanka, Angola and Ecuador contributed to performance while positioning in Egypt and Venezuela detracted from performance.
- Corporate and Quasi-sovereign positioning in Kazakhstan (KZOKZ), Argentina (BUENOS), Venezuela (PDVSA) and Costa Rica (BNALCR) contributed to performance, while positioning in China (CHGRID) detracted from performance.

Currency Selection

- Emerging market currencies were weaker during 2018, posting a total return of -3.33%. Overweights to the Indian rupee, Russian ruble and Brazilian real detracted from performance. An overweight to the Turkish lira along with underweights to the Philippines peso and Chilean peso contributed to performance.

	Performance Impact
Country Selection	+10 bps
Security Selection	+16 bps
Currency	-55 bps
Total	-29 bps

Country Selection

Region	Contribution
LatAm	+7 bps
Asia	-10
Euro	-27
Africa	+2
Middle East	+28
Other	+4
Developed	+5
Total	**+10 bps**

Security Selection

Region	Contribution
LatAm	+15 bps
Asia	-2
Euro	+4
Africa	-4
Middle East	+3
Other	0
Developed	0
Total	**+16 bps**

Currency

Top Contributors		Top Detractors	
Turkey	+11 bps	India	-19 bps
Philippines	+8 bps	Russia	-19 bps
Chile	+7 bps	Brazil	-17 bps
Switzerland	+7 bps	South Africa	-16 bps
Israel	+6 bps	Indonesia	-13 bps

Source of portfolio attribution: PGIM Fixed Income. Attribution shown above is based on gross returns. Represents attribution vs. the JP Morgan Emerging Markets Bond Index Global Diversified. Source of Benchmark: JP Morgan. Totals may not sum due to rounding. Past performance is not a reliable indicator of future performance. Please see Notice for important disclosures regarding the information contained herein.

Los Angeles City Employees' Retirement System

Total Return Attribution

Full Year 2018

	Returns
Portfolio	-4.55%
Benchmark	-4.26%
Excess Return	-0.29%
Contribution to Return	
Country Selection	+10 bps
Security Selection	+16 bps
Currency Selection	-55 bps

Country	Portfolio Exposure	Relative Exposure	Portfolio Return	Benchmark Return	Country BP Impact	Issue BP Impact	Currency Exposure	Currency Selection BP Impact	Total BP Impact
Argentina	3.9%	0.8%	-20.78%	-22.18%	-18	8	0.2%	0	-10
Belize	0.0%	-0.1%	0.00%	2.76%	0	0	0.0%	0	0
Bolivia	0.2%	-0.2%	-4.75%	-5.64%	0	0	0.0%	0	0
Brazil	5.0%	1.8%	1.03%	0.79%	9	2	0.5%	-17	-7
Chile	1.6%	-1.1%	-3.52%	-2.69%	-2	-1	-0.5%	7	4
Colombia	2.9%	-0.1%	-3.40%	-2.85%	0	-2	0.2%	1	-1
Costa Rica	1.4%	0.3%	-5.04%	-8.39%	0	5	0.0%	0	4
Dominican Republic	2.3%	-0.1%	-3.50%	-3.34%	0	0	0.0%	0	0
Ecuador	1.7%	-0.9%	-7.98%	-9.20%	4	3	0.0%	0	7
El Salvador	0.0%	-1.2%	0.00%	-2.97%	-2	0	0.0%	0	-2
Guatemala	0.8%	0.3%	-2.97%	-2.21%	1	-1	0.0%	0	0
Honduras	0.3%	0.0%	0.70%	-0.16%	0	0	0.0%	0	0
Jamaica	1.0%	-0.1%	-0.63%	-0.23%	0	0	0.0%	0	-1
Mexico	6.8%	1.7%	-6.27%	-6.31%	-4	0	0.6%	2	-2
Panama	2.8%	0.0%	-2.55%	-2.39%	0	-1	0.0%	0	0
Paraguay	0.5%	-0.2%	-1.33%	-2.09%	0	0	0.0%	0	0
Peru	3.8%	0.9%	-1.24%	-1.65%	3	1	0.5%	-3	1
Suriname	0.0%	-0.1%	0.00%	-1.33%	0	0	0.0%	0	0
Trinidad and Tobago	0.2%	-0.3%	-2.31%	-3.81%	0	0	0.0%	0	0
Uruguay	1.7%	-0.6%	-4.11%	-4.44%	0	1	0.0%	0	0
Venezuela	0.0%	-1.0%	0.00%	-20.17%	17	0	0.0%	0	17
LATAM	**37.1%**	**-0.1%**			**7**	**15**	**0.0%**	**-10**	**11**
China	2.1%	-2.1%	-0.73%	0.66%	-11	-3	-0.7%	3	-10
Hong Kong	0.0%	-0.3%	0.00%	1.99%	-2	0	0.0%	0	-2
India	1.0%	0.1%	-2.51%	-0.48%	1	-2	2.1%	-19	-20
Indonesia	5.3%	1.1%	-3.51%	-3.12%	3	-1	1.1%	-13	-11
South Korea	0.0%	0.0%	0.00%	0.00%	0	0	-0.1%	-3	-3
Malaysia	1.7%	-0.9%	-2.57%	-0.94%	-2	-3	0.5%	-3	-8
Mongolia	1.2%	0.5%	1.59%	0.86%	3	1	0.0%	0	3
Pakistan	1.9%	0.8%	-0.11%	-0.18%	5	0	0.0%	0	5
Papua New Guinea	0.1%	0.0%	1.93%	2.30%	0	0	0.0%	0	0
Philippines	1.5%	-1.7%	-0.45%	-0.71%	-6	0	-0.3%	8	3
Singapore	0.0%	0.0%	0.00%	0.00%	0	0	0.4%	-4	-4
Sri Lanka	2.4%	0.5%	-4.93%	-7.43%	-1	6	0.0%	0	5
Taiwan (Rep of China)	0.0%	0.0%	0.00%	0.00%	0	0	-0.5%	3	3
Thailand	0.0%	0.0%	0.00%	0.00%	0	0	0.3%	-1	-1
Vietnam	0.4%	0.1%	-1.15%	0.26%	0	-1	0.0%	0	0
ASIA	**17.6%**	**-2.0%**			**-10**	**-2**	**0.0%**	**-28**	**-40**
Armenia	0.0%	-0.2%	-0.95%	-0.66%	-1	0	0.0%	0	-1
Azerbaijan	1.2%	0.0%	2.22%	1.32%	0	1	0.0%	0	1
Belarus	0.4%	0.0%	1.12%	-0.90%	0	1	0.0%	0	1
Croatia	1.6%	0.0%	1.11%	0.82%	0	1	0.0%	0	0
Czech Republic	0.0%	0.0%	0.00%	0.00%	0	0	0.0%	-1	-1
Georgia	0.2%	0.0%	-0.92%	-0.44%	0	0	0.0%	0	0
Hungary	1.9%	-0.9%	-1.98%	-0.40%	-3	-4	-0.6%	1	-5
Kazakhstan	2.6%	-0.2%	2.28%	-1.36%	-2	13	0.0%	0	10
Latvia	0.0%	-0.1%	0.00%	1.35%	-1	0	0.0%	0	-1
Lithuania	0.0%	-1.0%	0.00%	0.79%	-5	0	0.0%	0	-5
Poland	0.1%	-2.2%	-0.26%	0.74%	-11	0	-0.3%	-2	-14
Romania	1.3%	0.0%	-3.96%	-3.33%	0	-1	0.0%	0	-1

Country	Portfolio Exposure	Relative Exposure	Portfolio Return	Benchmark Return	Country BP Impact	Issue BP Impact	Currency Exposure	Currency Selection BP Impact	Total BP Impact
Russian Federation	4.5%	0.9%	-1.86%	-2.09%	2	1	0.5%	-19	-16
The Rep of Serbia	0.7%	0.0%	1.05%	1.04%	0	0	0.0%	0	0
Slovakia	0.0%	-0.3%	0.00%	-0.12%	-1	0	0.0%	0	-1
Slovenia	0.0%	0.0%	0.46%	0.46%	0	0	0.0%	0	0
Turkey	4.7%	1.1%	-5.52%	-5.32%	-2	-1	0.3%	11	9
Ukraine	3.2%	0.5%	-9.29%	-7.27%	-2	-7	0.0%	0	-9
EURO	**22.2%**	**-2.4%**			**-27**	**4**	**0.0%**	**-9**	**-32**
Angola	1.0%	0.3%	-1.04%	-3.43%	2	3	0.0%	0	5
Cameroon	0.2%	0.0%	-7.31%	-7.48%	0	0	0.0%	0	0
Cote D'Ivoire	1.1%	0.3%	-6.82%	-8.32%	-1	2	0.0%	0	0
Egypt	1.8%	-0.7%	-10.54%	-6.88%	3	-7	0.0%	0	-4
Ethiopia	0.3%	0.1%	-2.45%	-2.65%	0	0	0.0%	0	0
Gabon	0.3%	-0.1%	-7.83%	-5.96%	-1	0	0.0%	0	-1
Ghana	1.0%	0.4%	-7.22%	-5.88%	-2	-1	0.0%	0	-2
Kenya	0.6%	-0.1%	-7.51%	-8.51%	1	1	0.0%	0	2
Morocco	0.4%	0.0%	-3.17%	-2.60%	0	0	0.0%	0	0
Mozambique	0.0%	-0.1%	0.00%	14.02%	-2	0	0.0%	0	-2
Namibia	0.2%	0.0%	-7.50%	-4.76%	0	-1	0.0%	0	-1
Nigeria	1.1%	-0.3%	-11.60%	-10.72%	2	-1	0.0%	0	1
Senegal	0.4%	0.0%	-12.05%	-10.62%	1	0	0.0%	0	0
South Africa	3.8%	1.1%	-2.58%	-2.50%	2	-1	-0.3%	-16	-14
Tunisia	0.5%	0.4%	-8.19%	-10.00%	-2	1	0.0%	0	-1
Zambia	0.6%	0.1%	-24.49%	-24.79%	-2	0	0.0%	0	-2
AFRICA	**13.4%**	**1.2%**			**2**	**-4**	**0.0%**	**-16**	**-18**
Bahrain	0.4%	0.4%	4.11%	4.11%	6	0	0.0%	0	6
Iraq	1.3%	0.6%	-0.79%	-1.11%	2	0	0.0%	0	2
Israel	0.1%	0.1%	0.41%	0.41%	0	0	-0.9%	6	7
Jordan	0.6%	0.1%	-4.60%	-3.90%	0	0	0.0%	0	0
Lebanon	1.2%	-1.2%	-4.14%	-6.74%	2	4	0.0%	0	6
Oman	2.0%	-0.6%	-8.38%	-7.96%	3	-1	0.0%	0	2
Qatar	0.5%	0.5%	6.77%	6.77%	7	0	0.0%	0	7
Saudi Arabia	0.9%	0.9%	0.88%	0.88%	5	0	0.0%	0	5
Tajikistan	0.0%	-0.1%	0.00%	-1.44%	0	0	0.0%	0	0
United Arab Emirates	0.7%	0.7%	1.15%	1.15%	4	0	0.0%	0	4
MIDDLE EAST	**7.7%**	**1.4%**			**28**	**3**	**0.0%**	**6**	**37**
Australia	0.0%	0.0%	0.00%	0.00%	0	0	0.0%	-2	-2
Canada	0.0%	0.0%	0.00%	0.00%	0	0	0.0%	-2	-2
Cayman Islands	0.0%	-0.1%	0.00%	0.67%	0	0	0.0%	0	0
Greece	0.4%	0.4%	4.45%	4.45%	4	0	0.0%	0	4
New Zealand	0.0%	0.0%	0.00%	0.00%	0	0	-0.1%	1	1
Supranational	0.2%	0.2%	0.73%	0.73%	1	0	0.0%	0	1
Switzerland	0.0%	0.0%	0.50%	0.50%	0	0	-0.6%	7	7
United Kingdom	0.0%	0.0%	0.00%	0.00%	0	0	0.0%	-1	-1
OTHER	**0.6%**	**0.5%**			**4**	**0**	**0.0%**	**2**	**7**
European Union	0.0%	0.0%	0.00%	0.00%	0	0	-0.5%	0	0
Japan	0.0%	0.0%	0.00%	0.00%	0	0	-0.1%	0	0
United States	0.2%	0.2%	258.15%	258.15%	1	0	0.0%	0	1
No Country	1.1%	1.1%	1.87%	1.87%	4	0	0.0%	0	4
DEVELOPED	**1.3%**	**1.3%**	**0.00%**	**0.00%**	**5**	**0**	**0.0%**	**0**	**5**
Total	**100%**				**10**	**16**	**0.0%**	**-55**	**-29**

Portfolio returns are reported on a gross basis and calculated using the Prudential internal market value. Benchmark: JP Morgan Emerging Markets Bond Index Global Diversified. Source of Benchmark: JP Morgan

Los Angeles City Employees' Retirement System

Performance Attribution

Year-to-date as of February 28, 2019

Attribution Commentary

Country Selection

- Overweights to Turkey, Mexico and Qatar along with underweights to Venezuela and Egypt drove negative performance. Venezuela outperformed as risk-on assets rallied in conjunction with EM hard currency's strong outperformance. Also, recent political developments indicate President Nicolas Maduro's regime could be coming closer to an end, which boosted the country's assets. Underweights to Poland, Lithuania, Philippines and Malaysia offset some of these losses.

Security Selection

- Sovereign positioning in Ecuador, Russia, Lebanon and Pakistan detracted from performance, while positioning in Egypt, Indonesia, Argentina and Kazakhstan contributed.
- Corporate and Quasi-sovereign positioning in Brazil (PETBRA) and India (POWFIN) contributed to performance, while positioning in Argentina (BUENOS) and Jamaica (DLLTD) detracted from performance.

Currency Selection

- Emerging market currencies were stronger during 2019, posting a total return of +2.21%. Underweights to the Chilean peso, China renminbi and South African rand detracted from performance. Overweights to the Russian ruble, Brazilian real and Thai baht contributed to performance.

	Performance Impact
Country Selection	-4 bps
Security Selection	+15 bps
Currency	-13 bps
Total	-2 bps

Country Selection

Region	Contribution
LatAm	-24 bps
Asia	+16
Euro	+15
Africa	+1
Middle East	-9
Other	+1
Developed	-4
Total	**-4 bps**

Security Selection

Region	Contribution
LatAm	0 bps
Asia	+5
Euro	+5
Africa	+2
Middle East	+1
Other	0
Developed	+1
Total	**+15 bps**

Currency

Top Contributors		Top Detractors	
Russia	+5 bps	Chile	-9 bps
Brazil	+3 bps	China	-5 bps
Thailand	+2 bps	South Africa	-5 bps
Philippines	+2 bps	Colombia	-2 bps
Turkey	+1 bps	India	-2 bps

Source of portfolio attribution: PGIM Fixed Income. Attribution shown above is based on gross returns. Represents attribution vs. the JP Morgan Emerging Markets Bond Index Global Diversified. Source of Benchmark: JP Morgan. Totals may not sum due to rounding. Past performance is not a reliable indicator of future performance. Please see Notice for important disclosures regarding the information contained herein.

Performance Attribution—Total Return

Los Angeles City Employees' Retirement System

	Returns
Portfolio	5.43%
Benchmark	5.45%
Excess Return	-0.02%
Contribution to Return	
Country Selection	-4 bps
Security Selection	+15 bps
Currency Selection	-13 bps

Total Return Attribution

Year-to-date as of February 28, 2019

Country	Portfolio Exposure	Relative Exposure	Portfolio Return	Benchmark Return	Country BP Impact	Issue BP Impact	Currency Exposure	Currency Selection BP Impact	Total BP Impact
Argentina	3.5%	0.7%	9.14%	9.04%	2	1	0.3%	1	3
Belize	0.0%	-0.1%	0.00%	5.42%	0	0	0.0%	0	0
Bolivia	0.2%	-0.2%	4.46%	6.08%	0	0	0.0%	0	0
Brazil	4.7%	1.4%	4.99%	3.85%	-2	5	0.7%	3	6
Chile	1.6%	-1.2%	4.34%	3.82%	2	1	-1.2%	-9	-6
Colombia	2.8%	-0.1%	4.58%	4.36%	0	1	-0.4%	-2	-1
Costa Rica	0.9%	-0.1%	9.83%	9.88%	0	0	0.0%	0	0
Dominican Republic	2.3%	-0.3%	5.32%	5.20%	0	0	0.0%	0	0
Ecuador	2.9%	0.2%	11.61%	13.04%	0	-3	0.0%	0	-4
El Salvador	0.8%	-0.2%	4.92%	7.12%	-1	0	0.0%	0	-1
Guatemala	0.7%	0.2%	4.31%	4.05%	0	0	0.0%	0	0
Honduras	0.4%	0.0%	3.91%	4.84%	0	0	0.0%	0	0
Jamaica	1.0%	-0.1%	1.88%	4.81%	0	-3	0.0%	0	-3
Mexico	7.2%	2.2%	3.96%	3.85%	-3	1	0.3%	1	-2
Panama	2.8%	0.0%	3.79%	4.14%	0	-1	0.0%	0	-1
Paraguay	0.5%	-0.2%	3.78%	5.03%	0	-1	0.0%	0	0
Peru	3.7%	0.7%	3.70%	3.95%	-1	-1	0.1%	0	-2
Suriname	0.0%	-0.1%	0.00%	2.08%	0	0	0.0%	0	0
Trinidad and Tobago	0.2%	-0.2%	4.37%	4.40%	0	0	0.0%	0	0
Uruguay	1.7%	-0.8%	4.49%	4.44%	1	0	0.0%	0	1
Venezuela	0.0%	-1.0%	0.00%	30.28%	-20	0	0.0%	0	-20
LATAM	**37.7%**	**0.9%**			**-24**	**0**	**0.0%**	**-6**	**-30**
China	1.8%	-2.6%	1.97%	1.62%	10	1	-1.5%	-5	5
Hong Kong	0.0%	-0.2%	0.00%	1.30%	1	0	0.0%	0	1
India	1.2%	0.4%	3.97%	2.24%	-1	2	1.3%	-2	-1
Indonesia	6.0%	1.5%	4.52%	4.09%	-2	3	-0.1%	-1	0
South Korea	0.0%	0.0%	0.00%	0.00%	0	0	-0.7%	0	0
Malaysia	1.3%	-1.3%	4.74%	2.79%	3	2	0.0%	0	6
Mongolia	1.2%	0.4%	4.80%	5.33%	0	-1	0.0%	0	-1
Pakistan	1.7%	0.7%	4.51%	5.26%	1	-2	0.0%	0	-1
Papua New Guinea	0.3%	0.2%	6.80%	6.42%	0	0	0.0%	0	0
Philippines	1.6%	-1.7%	3.60%	3.35%	4	0	1.1%	2	6
Singapore	0.0%	0.0%	0.00%	0.00%	0	0	0.3%	0	0
Sri Lanka	2.3%	0.3%	5.47%	6.11%	0	-1	0.0%	0	-1
Taiwan	0.0%	0.0%	0.00%	0.00%	0	0	1.7%	-1	-1
Thailand	0.0%	0.0%	0.00%	0.00%	0	0	1.2%	2	2
Vietnam	0.1%	-0.1%	1.64%	4.22%	0	0	0.0%	0	0
ASIA	**17.4%**	**-2.4%**			**16**	**5**	**0.0%**	**-6**	**15**
Armenia	0.0%	-0.2%	0.00%	4.24%	0	0	0.0%	0	0
Azerbaijan	1.1%	-0.1%	3.93%	4.14%	0	0	0.0%	0	0
Belarus	0.3%	-0.1%	3.30%	5.40%	0	-1	0.0%	0	-1
Croatia	0.3%	-1.1%	0.87%	2.38%	3	0	0.0%	0	3
Czech Republic	0.0%	0.0%	0.00%	0.00%	0	0	0.9%	-1	-1
Georgia	0.2%	0.0%	4.03%	2.61%	0	0	0.0%	0	0
Hungary	1.6%	-0.7%	3.51%	2.44%	2	2	-1.0%	-2	2
Kazakhstan	2.2%	-0.7%	6.84%	5.82%	0	2	0.0%	0	2
Lithuania	0.0%	-0.8%	0.00%	0.90%	4	0	0.0%	0	4
Netherlands	0.0%	0.0%	0.00%	0.26%	0	0	0.0%	0	0
Poland	0.1%	-2.0%	2.04%	1.63%	7	0	-1.0%	0	7
Romania	1.5%	0.2%	2.95%	2.59%	0	1	0.0%	0	0

Country	Portfolio Exposure	Relative Exposure	Portfolio Return	Benchmark Return	Country BP Impact	Issue BP Impact	Currency Exposure	Currency Selection BP Impact	Total BP Impact
Russian Federation	4.0%	0.5%	2.87%	3.68%	-1	-3	1.4%	5	2
The Rep of Serbia	0.2%	-0.4%	4.44%	1.66%	2	0	0.0%	0	2
Slovakia	0.0%	-0.3%	0.00%	1.68%	1	0	0.0%	0	1
Turkey	4.6%	1.0%	3.60%	2.99%	-4	3	0.5%	1	0
Ukraine	3.3%	0.8%	7.93%	7.55%	1	1	0.0%	0	3
EURO	**19.3%**	**-4.0%**			**15**	**5**	**0.0%**	**3**	**23**
Angola	1.2%	0.2%	10.66%	12.11%	1	-1	0.0%	0	0
Cameroon	0.1%	0.0%	7.09%	6.92%	0	0	0.0%	0	0
Cote D'Ivoire	1.1%	0.3%	8.89%	9.98%	1	-1	0.0%	0	0
Egypt	1.9%	-0.7%	11.73%	9.53%	-2	4	0.1%	0	2
Ethiopia	0.2%	0.1%	6.63%	6.52%	0	0	0.0%	0	0
Gabon	0.0%	-0.4%	0.00%	8.98%	-1	0	0.0%	0	-1
Ghana	1.1%	0.3%	7.92%	9.03%	1	-1	0.0%	0	0
Kenya	0.6%	-0.2%	12.59%	13.73%	-1	-1	0.0%	0	-2
Morocco	0.4%	-0.1%	2.66%	2.53%	0	0	0.0%	0	0
Mozambique	0.0%	-0.1%	0.00%	-8.15%	2	0	0.0%	0	2
Namibia	0.2%	0.0%	7.28%	5.55%	0	0	0.0%	0	0
Nigeria	1.9%	-0.1%	13.76%	13.34%	-1	1	0.0%	0	-1
Senegal	0.5%	0.1%	10.63%	10.34%	0	0	0.0%	0	0
South Africa	3.9%	1.1%	6.30%	5.93%	0	1	-1.1%	-5	-3
Tunisia	0.5%	0.3%	5.91%	6.45%	0	0	0.0%	0	0
Zambia	0.6%	0.2%	9.96%	10.14%	1	0	0.0%	0	1
AFRICA	**14.3%**	**1.0%**			**1**	**2**	**0.0%**	**-5**	**-2**
Bahrain	0.9%	0.8%	7.06%	6.10%	0	1	0.0%	0	1
Iraq	1.3%	0.6%	8.53%	8.68%	2	0	0.0%	0	2
Israel	0.2%	0.2%	0.87%	0.87%	0	0	-0.4%	-2	-2
Jordan	0.4%	-0.2%	10.07%	8.77%	-1	0	0.0%	0	0
Kuwait	0.0%	0.0%	0.00%	0.56%	0	0	0.0%	0	0
Lebanon	0.9%	-1.4%	4.83%	7.07%	-2	-2	0.0%	0	-4
Oman	2.0%	-0.5%	7.95%	7.48%	-1	1	0.0%	0	0
Qatar	1.2%	1.0%	3.03%	2.67%	-3	0	0.0%	0	-3
Saudi Arabia	1.7%	1.5%	4.39%	4.37%	-2	0	0.0%	0	-2
Tajikistan	0.0%	-0.1%	0.00%	6.38%	0	0	0.0%	0	0
United Arab Emirates	1.1%	1.0%	3.21%	3.02%	-2	0	0.0%	0	-2
MIDDLE EAST	**9.6%**	**2.9%**			**-9**	**1**	**0.0%**	**-2**	**-10**
Australia	0.0%	0.0%	0.00%	0.00%	0	0	-0.1%	0	0
Canada	0.0%	0.0%	0.00%	0.00%	0	0	0.1%	1	1
Greece	0.3%	0.3%	9.02%	9.02%	1	0	0.0%	0	1
Luxembourg	0.0%	0.0%	0.00%	2.38%	0	0	0.0%	0	0
New Zealand	0.0%	0.0%	0.00%	0.00%	0	0	-0.2%	0	0
Supranational	0.2%	0.2%	2.04%	2.04%	-1	0	0.0%	0	-1
Switzerland	0.3%	0.3%	3.67%	3.67%	1	0	-0.2%	1	1
United Kingdom	0.0%	0.0%	0.00%	0.00%	0	0	0.0%	0	0
OTHER	**0.9%**	**0.8%**			**1**	**0**	**0.0%**	**2**	**3**
European Union	0.0%	0.0%	0.00%	0.00%	0	0	0.5%	0	0
Japan	0.0%	0.0%	0.00%	0.00%	0	0	0.4%	0	0
United States	0.1%	0.1%	8.74%	0.98%	0	1	0.0%	0	1
No Country	0.7%	0.7%	0.39%	0.39%	-4	0	0.0%	0	-4
DEVELOPED	**0.8%**	**0.7%**	**0.00%**	**0.00%**	**-4**	**1**	**0.0%**	**0**	**-3**
Total	**100%**				**-4**	**15**	**0.0%**	**-13**	**-2**

Portfolio returns are reported on a gross basis and calculated using the Prudential internal market value. Benchmark: JP Morgan Emerging Markets Bond Index Global Diversified. Source of Benchmark: JP Morgan

Los Angeles City Employees' Retirement System

	Client Investment Guidelines
Portfolio Credit Quality	≥Ba1 as rated by Moody's or BB+ as rated by Standard & Poor's. The higher rating between Moody's and Standard & Poor's shall be used for split-rated bonds in determining the average quality of the LACERS account.
Individual Issue Credit Quality	≧B3 by Moody's or B- by Standard & Poor's. Non-rated issues allowed up to 10%

Source: Los Angeles City Employees' Retirement System.

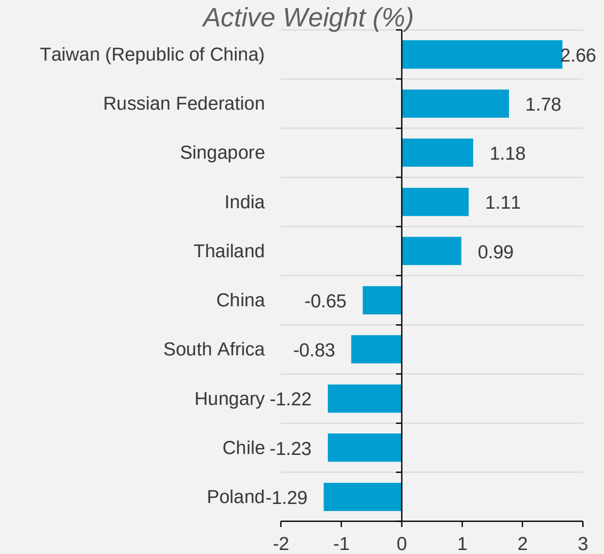
Los Angeles City Employees' Retirement System

As of February 28, 2019

Hard Currency			
Issuer	**Portfolio** *(% MV)*	**Benchmark** *(% MV)*	**Active Weight** *(%)*
Mexico	6.97	4.73	2.24
Indonesia	5.82	4.31	1.50
Brazil	4.54	3.14	1.41
Saudi Arabia	2.10	0.74	1.36
South Africa	3.89	2.68	1.21
China	1.83	4.28	-2.45
Poland	0.10	2.10	-2.00
Philippines	1.54	3.19	-1.65
Croatia	0.00	1.33	-1.33
Lebanon	0.88	2.21	-1.33

Hard Currency			
Issuer	**Portfolio Dur. Contr.** *(yrs)*	**Benchmark Dur. Contr.** *(yrs)*	**Active Dur. Contr.** *(yrs)*
Saudi Arabia	0.22	0.07	0.15
Indonesia	0.49	0.35	0.14
Mexico	0.50	0.39	0.10
Brazil	0.33	0.23	0.10
Qatar	0.14	0.06	0.08
Philippines	0.14	0.28	-0.14
Uruguay	0.19	0.29	-0.11
Lebanon	0.03	0.12	-0.09
Chile	0.17	0.25	-0.08
Poland	0.00	0.08	-0.07

Currency Exposure



Sector Breakdown	**Portfolio** *(% MV)*	**Benchmark** *(% MV)*
Hard Currency	**99.51**	**100.00**
Sovereign	70.48	79.31
Quasi-Sovereign	25.63	20.56
Corporates	3.39	0.14

Quality Breakdown[1]	**Portfolio** *(% MV)*	**Benchmark** *(% MV)*
AAA Category[2]	0.35	0.00
AA Category	1.61	1.23
A Category	6.34	11.39
BBB Category	36.25	35.71
BB Category	19.19	19.20
B Category	34.34	29.30
Below B and NR	1.92	3.16

Characteristics	**Portfolio**	**Benchmark**
Market Value *($)*	368,830,283	---
Effective Duration *(yrs)*	7.11	6.80
Effective Yield *(%)*[3]	5.96	5.51
Average Maturity *(WAL yrs)*	11.61	11.03
Option Adjusted Spread *(bps)*	324	278
Average Quality *(Moody's)*	Ba2	Ba1

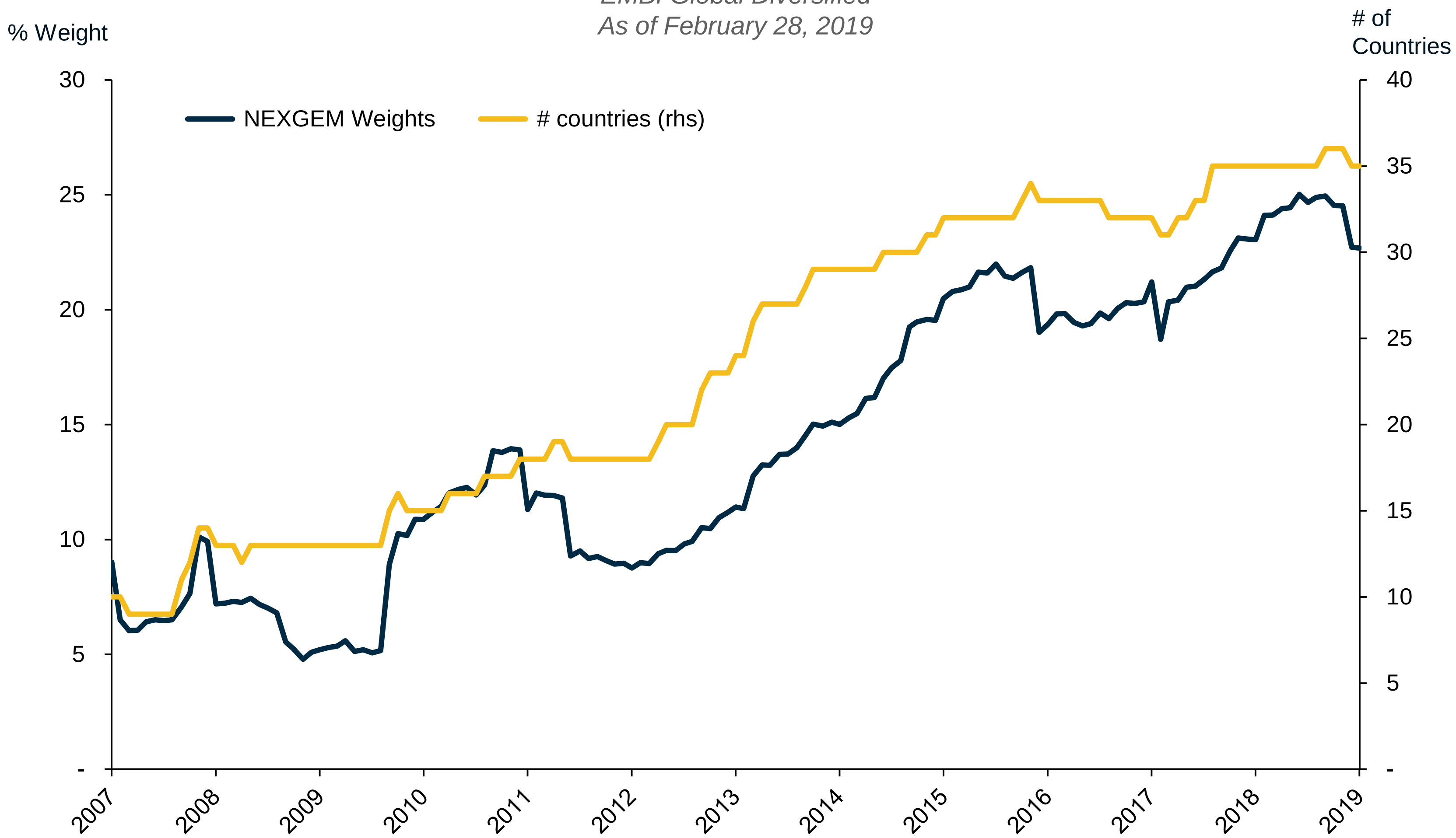
Source of portfolio data: PGIM Fixed Income. Benchmark: JP Morgan Emerging Markets Bond Index Global Diversified. Source of Benchmark: JP Morgan.
Please see Notice for important disclosures regarding the information contained herein. Benchmark statistics based on PGIM analytics and may differ from published statistics by official benchmark vendors.
1. Quality Ratings are reported as the median of Moody's, S&P and Fitch.
2. AAA Category includes cash and cash equivalents.
3. Effective yield is calculated excluding the yield impact of foreign exchange positions and derivatives (other than interest rate futures, which are included in the calculation).

Frontier Markets Continue to Become an Increasing Part of the EM Investible Universe

Next Generation EM Country Weights

EMBI Global Diversified

As of February 28, 2019



Source: JPMorgan.

NEXGEM and Other Idiosyncratic Countries Can Be Fertile Ground for Alpha

Country Index Returns

EMBI Global Diversified Index

February YTD 2019

Top 15 Performers In The Index

Top 15	Index Total Return (%)	Alpha[1]
Venezuela	30.28	-2
Kenya	13.73	+1
Nigeria	13.34	+1
Ecuador	13.03	+3
Angola	12.11	+1
Senegal	10.34	0
Zambia	10.15	+1
Cote D'Ivoire	9.98	+1
Costa Rica	9.87	+2
Egypt	9.52	+3
Argentina	9.04	+9
Ghana	9.03	0
Gabon	8.98	+1
Jordan	8.76	0
Iraq	8.68	+2

Bottom 15 Performers In The Index

Bottom 15	Index Total Return (%)	Alpha[1]
Turkey	2.99	-1
Malaysia	2.79	+6
Georgia	2.61	0
Romania	2.59	+2
Morocco	2.53	+1
Hungary	2.44	+4
Croatia	2.37	+4
India	2.24	+1
Suriname	2.08	0
Slovakia	1.68	+1
Serbia	1.66	+2
Poland	1.63	+8
China	1.62	+5
Lithuania	0.90	+4
Mozambique	-8.15	0

Feb YTD Total Index Return: 5.45%

FY 2018

Top 15—FY 2018	Index Total Return (%)	Alpha[1]
Mozambique	14.02	0
Belize	2.76	0
Azerbaijan	1.31	+1
Serbia	1.04	-3
Mongolia	0.86	+5
Croatia	0.82	-7
Brazil	0.79	-5
Lithuania	0.79	-5
China	0.76	-10
Poland	0.74	-14
Vietnam	0.27	-1
Slovakia	-0.12	-1
Honduras	-0.15	+1
Pakistan	-0.19	+4
Jamaica	-0.24	-3

Bottom 15—FY 2018	Index Total Return (%)	Alpha[1]
Egypt	-6.88	-4
Ukraine	-7.27	-4
Sri Lanka	-7.43	+2
Cameroon	-7.48	0
Oman	-7.95	+2
Cote D'Ivoire	-8.32	0
Costa Rica	-8.39	-2
Kenya	-8.51	+2
Ecuador	-9.20	+3
Tunisia	-10.00	-1
Senegal	-10.63	-1
Nigeria	-10.73	0
Venezuela	-20.29	+12
Argentina	-22.22	-38
Zambia	-24.79	0

2018 Total Index Return: -4.26%

FY 2017

Top 15—FY 2017	Index Total Return (%)	Alpha[1]
Belize	57.13%	+2
Angola	24.24	+7
Mongolia	23.69	+5
Iraq	23.53	+9
Ethiopia	21.61	+1
Mozambique	21.14	+1
Zambia	20.89	+3
Cameroon	20.69	+2
El Salvador	19.93	+3
Ecuador	19.21	+4
Uruguay	19.13	-4
Ghana	18.47	+3
Ukraine	17.91	+15
Dominican Republic	17.01	+2
Egypt	16.75	+13

Bottom 15—FY 2017	Index Total Return (%)	Alpha[1]
Venezuela	-34.43%	+17
Bolivia	0.47	+3
Latvia	2.16	+1
Slovakia	3.41	+2
Lithuania	4.42	+6
China	4.6	+16
India	4.93	+3
Poland	5.27	+13
Lebanon	5.34	-1
Philippines	5.91	+17
Russia	5.99	+17
Pakistan	6.36	0
South Africa	7.15	+4
Serbia	7.23	+3
Hungary	7.52	+14

2017 Total Index Return: 10.26%

(green) = Countries we were Overweight (yellow) = Countries we were Underweight (grey) = Neutral

Past performance is not a guarantee or reliable indicator of future results. Please see the Reference section for important disclosures. *The value of investments can go down as well as up. Where overseas investments are held the rate of currency exchange may cause the value of investments to fluctuate. If applicable, investments in emerging markets are by their nature higher risk and more volatile than those inherent in some established markets and non-USD securities are converted to USD using spot rate conversion. For illustrative purposes only. You cannot invest directly in the index. Source: JPMorgan and PGIM Fixed Income. Subject to change. Actual results may vary for each client due to specific client guidelines and other factors. The Emerging Markets Bond Index Global Diversified (EMBI Global) tracks total returns for USD-denominated debt instruments issued by emerging market sovereign and quasi-sovereign entities: Brady bonds, loans, and Eurobonds. It limits the weights of those index countries with larger debt stocks by only including specified portions of these countries' eligible current face amounts of debt outstanding. To be deemed an emerging market by the EMBI Global Diversified Index, a country must be rated Baa1/BBB+ or below by Moody's/S&P rating agencies. Information has been obtained from sources believed to be reliable but J.P. Morgan does not warrant its completeness or accuracy. The J.P. Morgan Next Generation Markets index (NEXGEM) tracks total returns for Next Generation markets, which we define as the smaller, less liquid population of emerging market economies, where investment opportunities in the external debt market are limited relative to the larger BRIC countries. The Index is used with permission. The Index may not be copied, used, or distributed without J.P. Morgan's prior written approval.* *All returns over one year are annualized.* [1] *Alpha = Basis Point contribution from country and security selection for the representative portfolio within the Emerging Markets Debt Composite. Top and bottom performers of the index is based on the total return of the respective country sub-index for the EMBI Global Diversified Index.*

4 Market Review & Outlook

Uncertainty Creating Opportunities

Base Case

- Selloff has created attractive valuations
- Global growth is divergent, but expected to expand at moderate pace
- Current account improvements, stronger reserves, and manageable external debt to prevent repeat of 2013
- Future Fed moves are data dependent
- ECB policy reversal reflect risks to downside
- Cycle long, but next global recession not likely to be policy provoked
- Broad USD weakness to eventually reassert itself, but timing is uncertain

Strategy

Spread Risk—Mid/Late Cycle

- Focus on relative value
- Selective upgrade trades for minimal give in yield
- Look for opportunities along both flat and steep curves
- Focus on carry/roll
- Selective corporate adds
- Keep cash low

EMFX—Mid Cycle

- EM currencies generally good fundamental value
- Focus on relative value and carry positions, with a small short dollar bias
- Looking for signs of growth pickup and a stabilization of geopolitical volatility to increase exposure

Local Bonds—Mixed Cycle

- Favor markets where excessive hikes priced in
- Adding exposure given benign global inflation outlook

What are Potential Drivers of the Next Major Selloff?

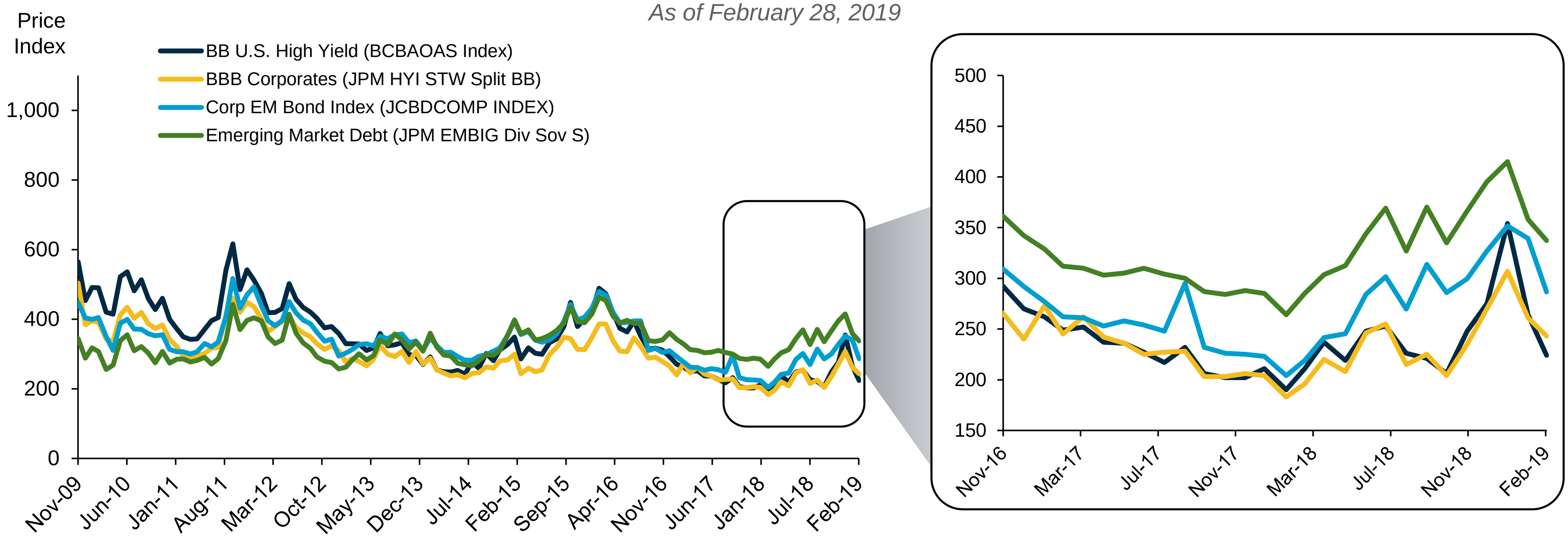
~~Systematic Important Hedge Funds~~	~~Banking Crisis~~
China Slowdown	~~**Inflation Spike** — FED, ECB, BOJ perceived to be behind the curve~~
Global Recession	**Trade Wars**
Adverse Feedback Loops	**Unknown Systemic Risk**

Source: PGIM Fixed Income as of March 2019. The comments opinions and estimates contained herein are based on and/or derived from publicly available information from sources that PGIM Fixed Income believes to be reliable. We do not guarantee the accuracy of such sources or information. This outlook, which is for informational purposes only, sets forth our views as of this date. The underlying assumptions and our views are subject to change. Past performance is not a guarantee or a reliable indicator of future results. Provided for discussion purposes only. Does not constitute a recommendation regarding the merits of any investments. Does not constitute investment advice and should not be used as the basis for any investment decision. Does not constitute a representation that PGIM Fixed Income has purchased or would purchase any of the investments referenced or that any such investments would be profitable.

Emerging Market Spreads Look Attractive Relative to Similarly Rated U.S. Bonds

Emerging Market Debt Spreads vs. High Yield and BBB Corporates

As of February 28, 2019



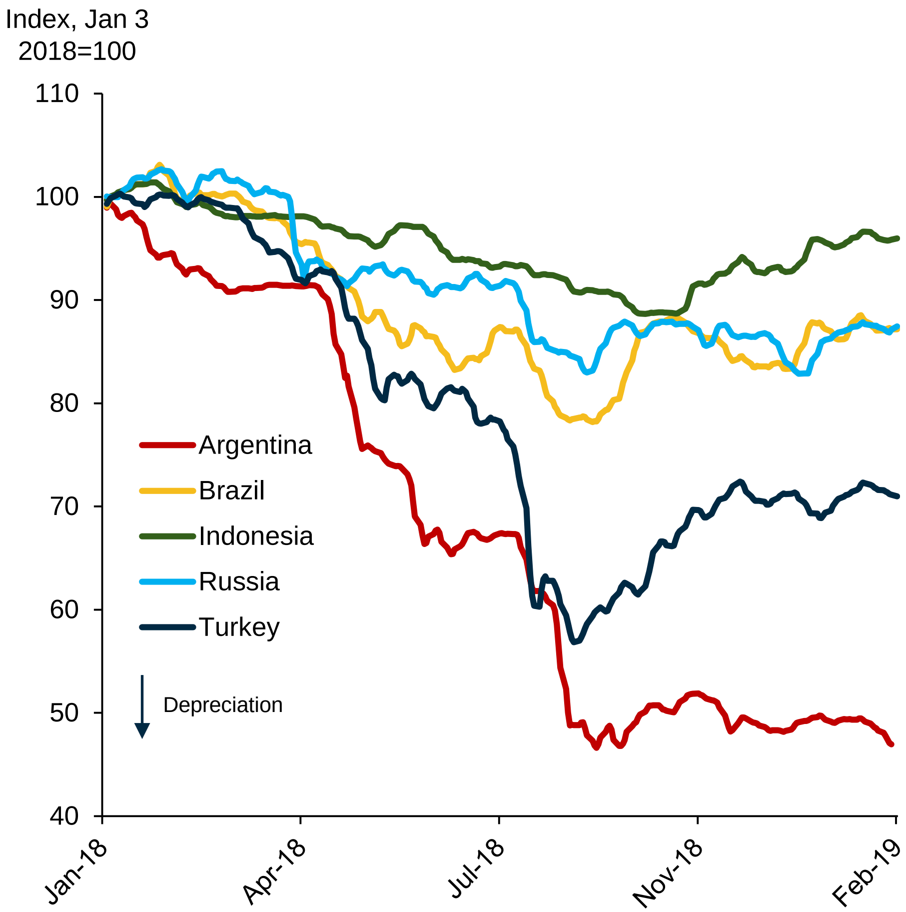
Credit Spreads (bps)

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2/28/2019
BB U.S. High Yield	1,211	453	399	512	359	269	324	417	270	211	354	224
Split BBB Corporates	1,024	384	342	436	310	271	283	347	240	204	307	243
Emerging Market Debt	748	288	274	404	257	308	353	415	342	285	415	337
EM Corporate	983	403	313	492	294	311	353	431	292	223	352	286

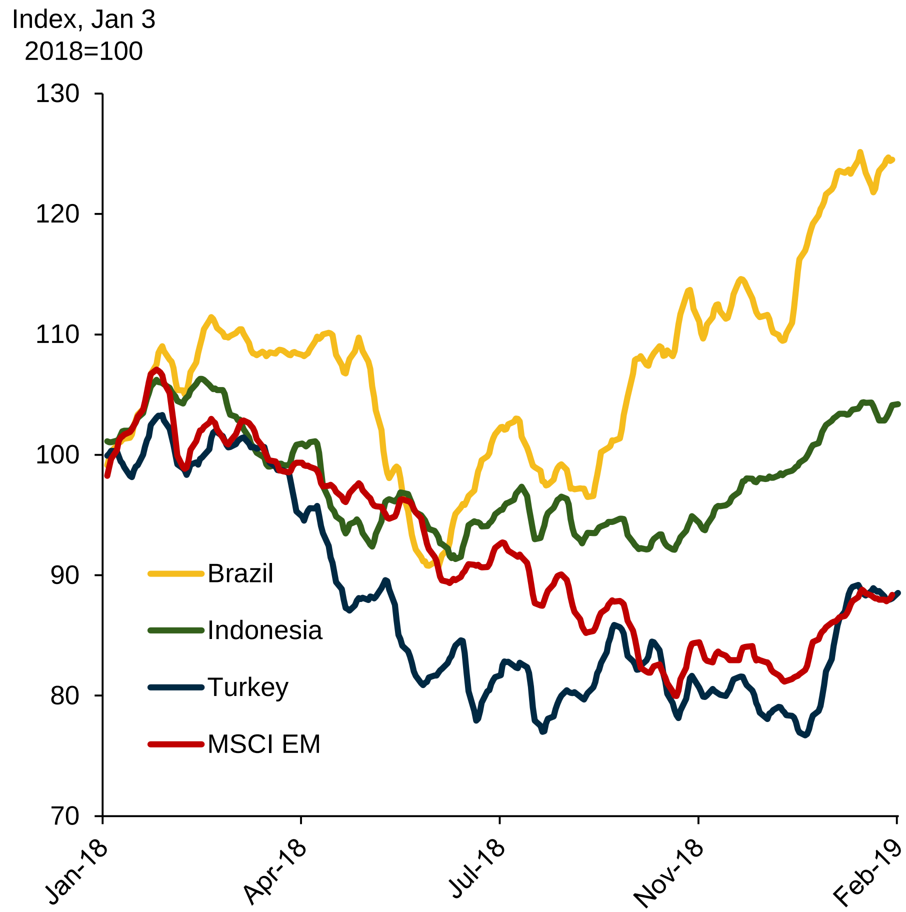
Source of all charts: Bloomberg.
Past performance is not a guarantee or a reliable indicator of future results. An investment cannot be made directly in an index.

Market Pressures on Major EMs Have Eased

EM Currencies Against USD
As of February 2019



EM Stock Indices
As of February 2019



Source: Haver Analytics.

EM Growth Consistent Amidst Modest Global Slowdown

- Emerging Markets—EM growth generally solid despite idiosyncratic volatility
- U.S.—Solid economic performance in the private sector, but fiscal boost expected to wane; pro-business policies positive for long-term growth
- Euro area—Cyclical recovery slowing but remaining near potential, amidst gradual monetary policy normalization, concerns about Italy and trade wars
- China—Authorities are pausing de-leveraging campaign and are dialing-up debt-funded stimulus in order to boost growth in the face of trade escalation with the U.S.
- Japan—High profile policy experiment, but measures are getting some traction in the labor market

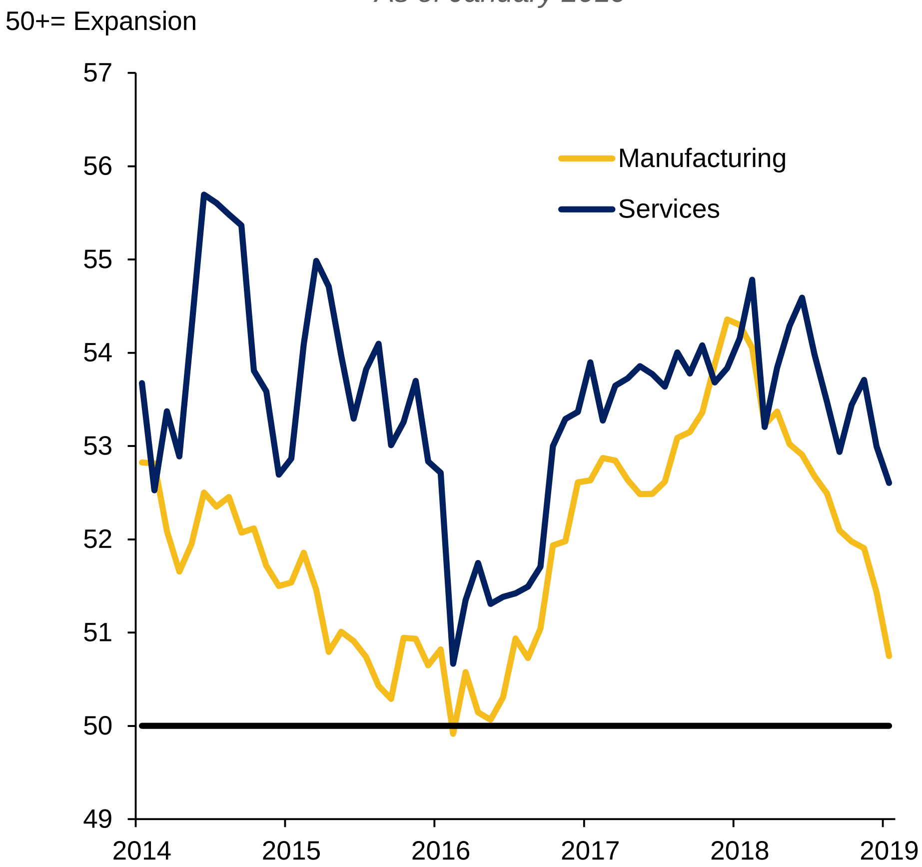
Annual Growth (%)

	2013	2014	2015	2016	2017	2018-Estimate		2019-Forecast	
	Actual	Actual	Actual	Actual	Actual	Bloomberg Survey	PGIM Fixed Income	Bloomberg Survey	PGIM Fixed Income
Emerging Markets	5.1	4.7	3.7	4.4	4.9	4.7	4.7	4.6	4.6
Developed Markets	1.4	2.1	2.3	1.7	2.4	2.3	2.2	1.9	1.9
Difference EM vs DM	3.7	2.6	1.4	2.7	2.5	2.4	2.4	2.7	2.6
Global	3.5	3.6	3.1	3.3	3.9	3.7	3.7	3.5	3.5
U.S.	1.8	2.5	2.9	1.6	2.2	2.9	2.9	2.5	2.5
Euro Area	-0.2	1.4	2.0	1.9	2.5	1.8	1.8	1.3	1.2
China	7.8	7.3	4.8	7.7	7.4	6.6	6.6	6.2	6.3
Japan	2.0	0.3	1.3	0.6	1.9	0.7	0.8	0.8	1.0

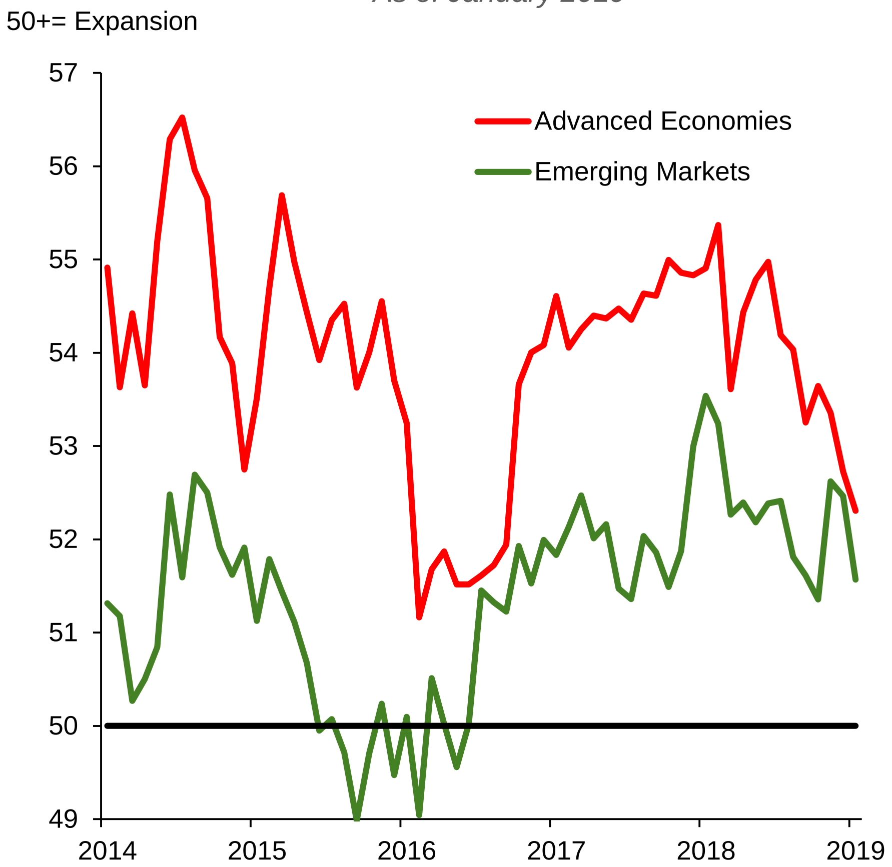
As of March 2019. Source: PGIM Fixed Income and Bloomberg. The comments, opinions, and estimates contained herein are based on and/or derived from publicly available information from sources that PGIM Fixed Income believes to be reliable. We do not guarantee the accuracy of such sources or information. This outlook, which is for informational purposes only, sets forth our views as of this date. The underlying assumptions and our views are subject to change. Survey forecast for global growth based on average forecast from several broker dealers and PGIM Fixed Income calculations. The forecasts presented herein are for informational purposes. There can be no assurance that these forecasts will be achieved. Please see the Reference section for additional disclosures.

PMIs Paint a Mixed Picture of Economic Conditions

Global PMIs
As of January 2019

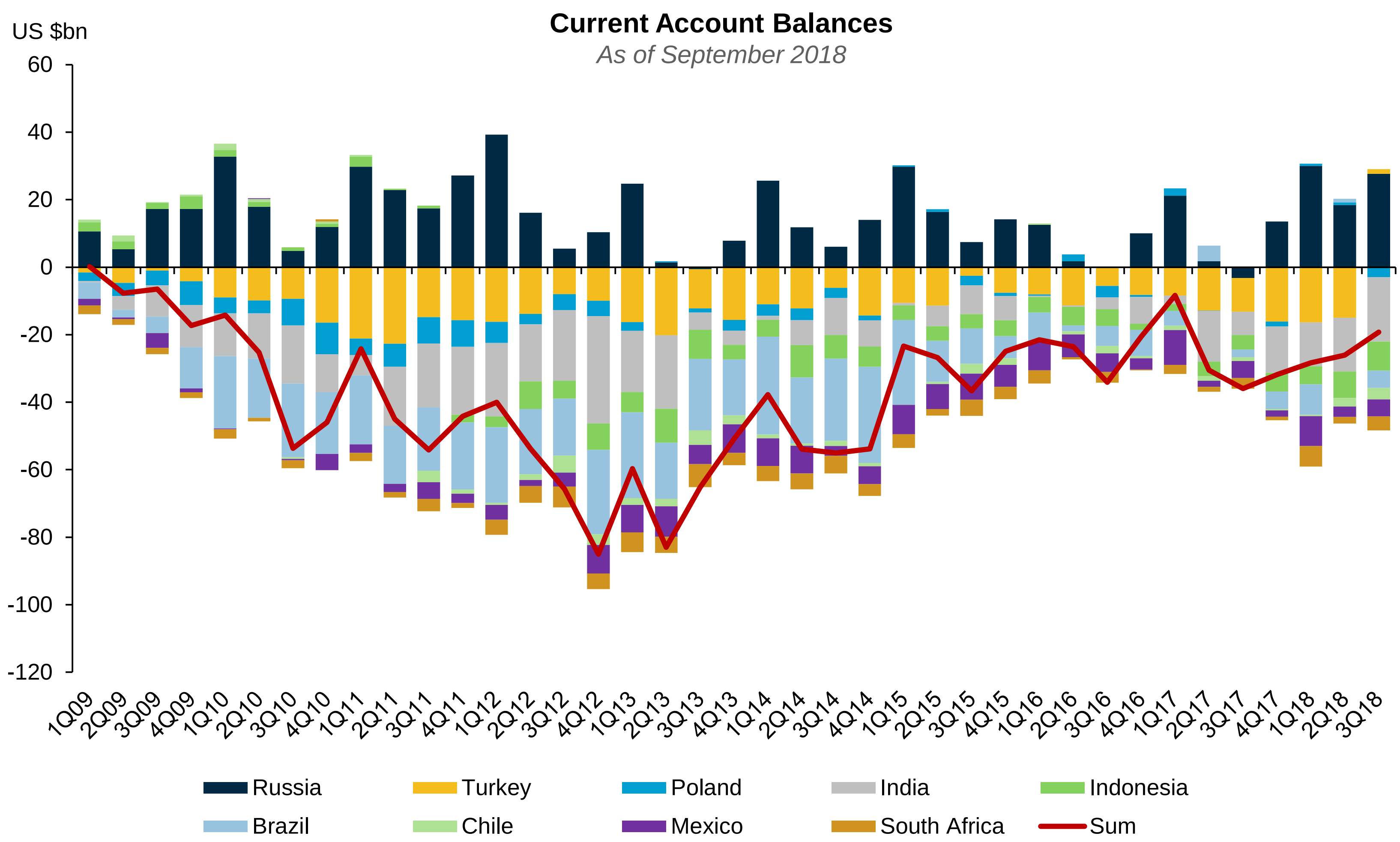


Global Composite PMIs
As of January 2019



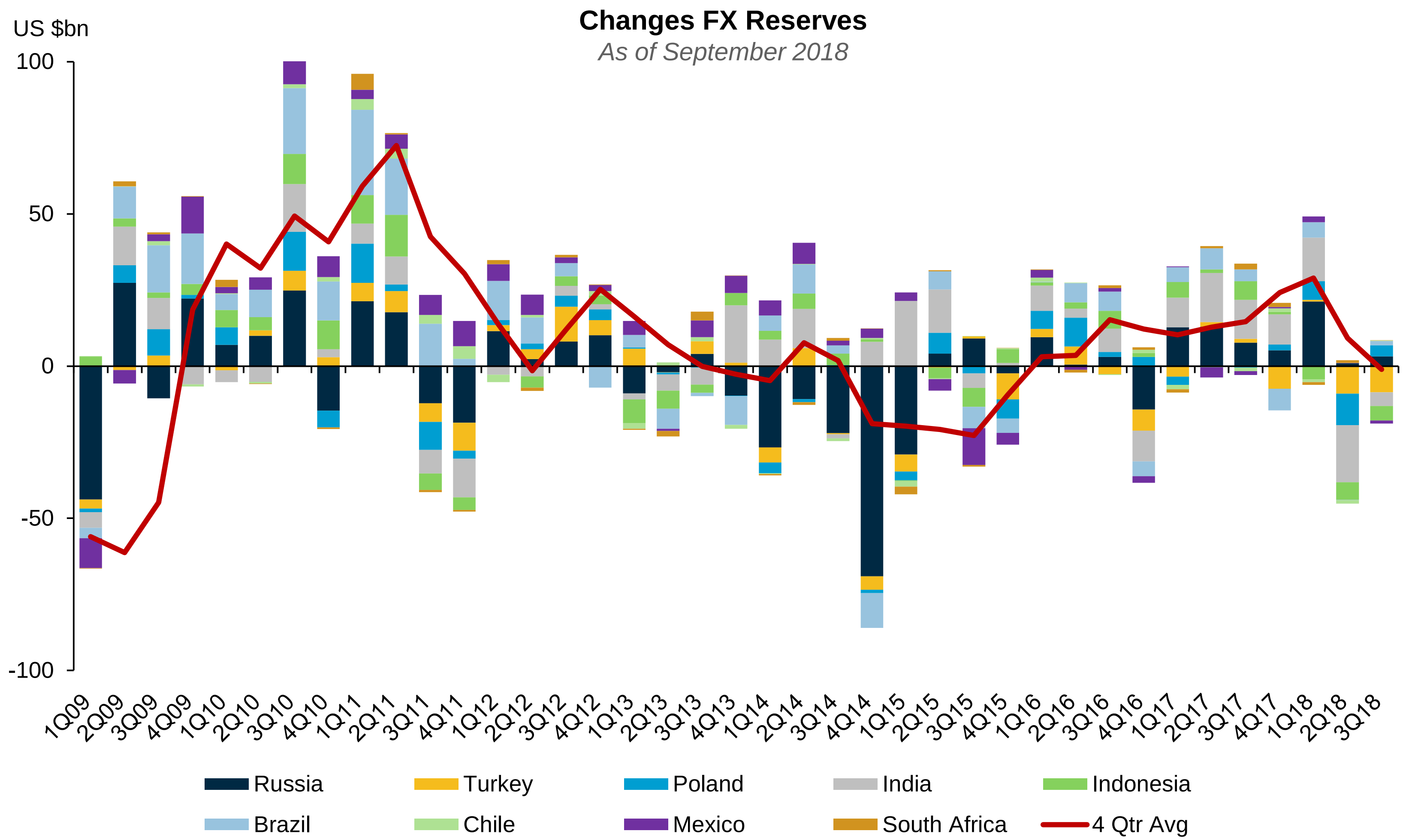
Source: Haver Analytics, PGIM Fixed Income, Markit

Emerging Markets Current Account Improved Sharply Since 2013



Source: IMF and Haver.

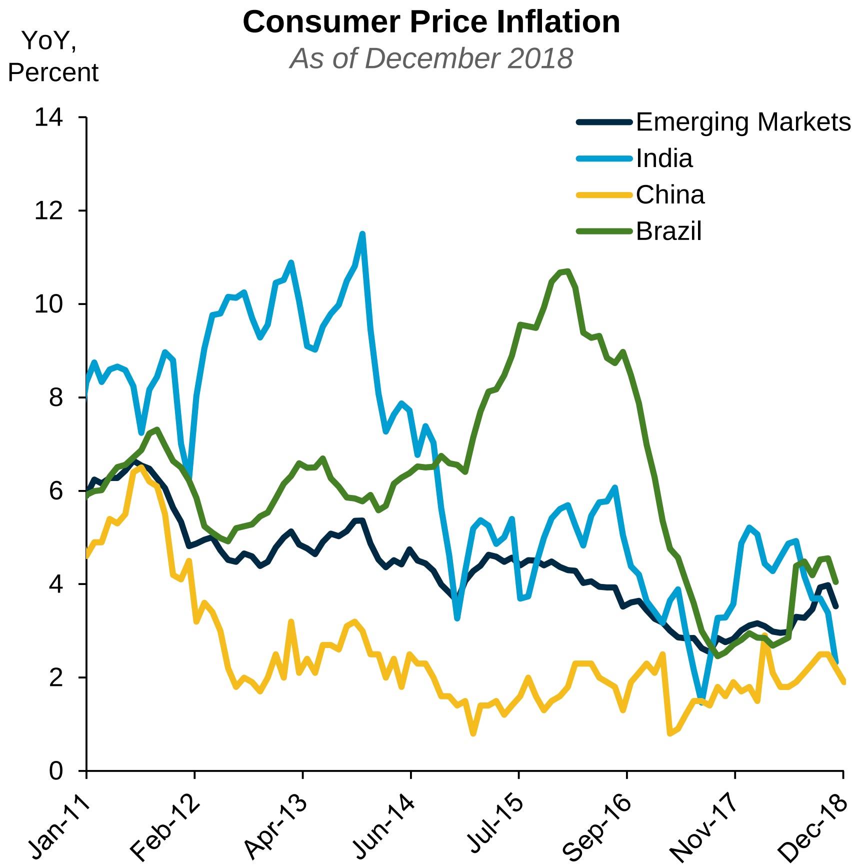
EM Central Bank Reserves are Supportive in Current Market Context

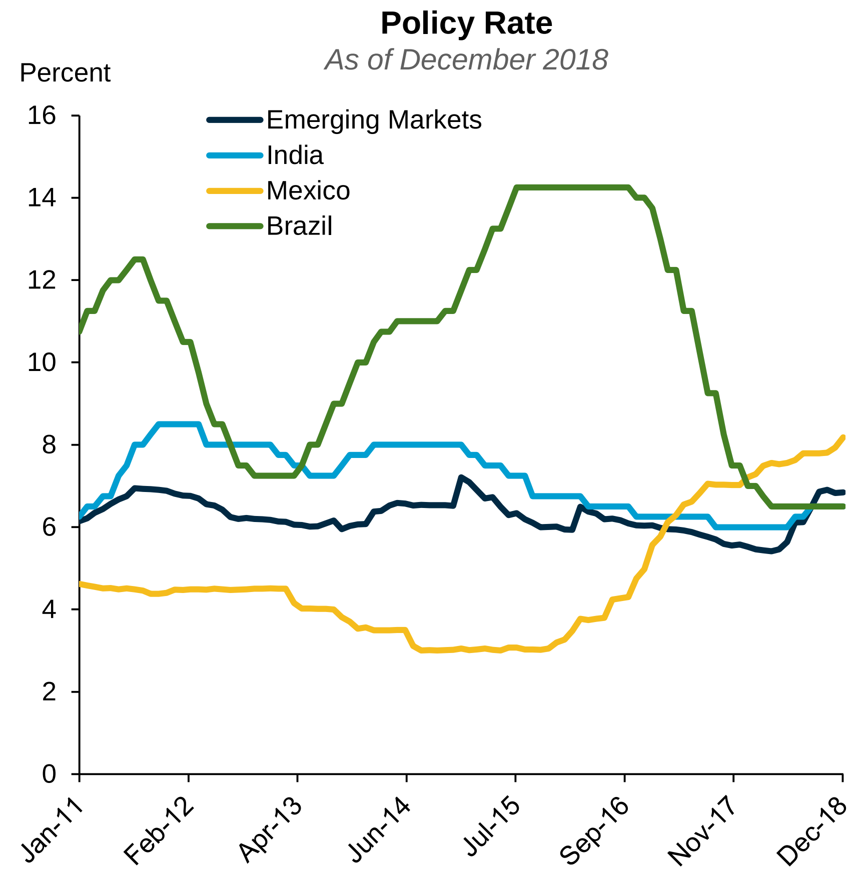


Source: IMF and Haver.

Given Moderate Inflation, Central Banks Have Generally Eased or Remained on Hold

- The Bank of Mexico is an exception: It has hiked rates in anticipation of further Fed tightening and in response to global political uncertainties





Source: Haver, PGIM Fixed Income.

Policy Rates and Inflation in Many EMs Are Still Moderate—With Some Exceptions

EM Policy Rates (Percent)
As of February 2019

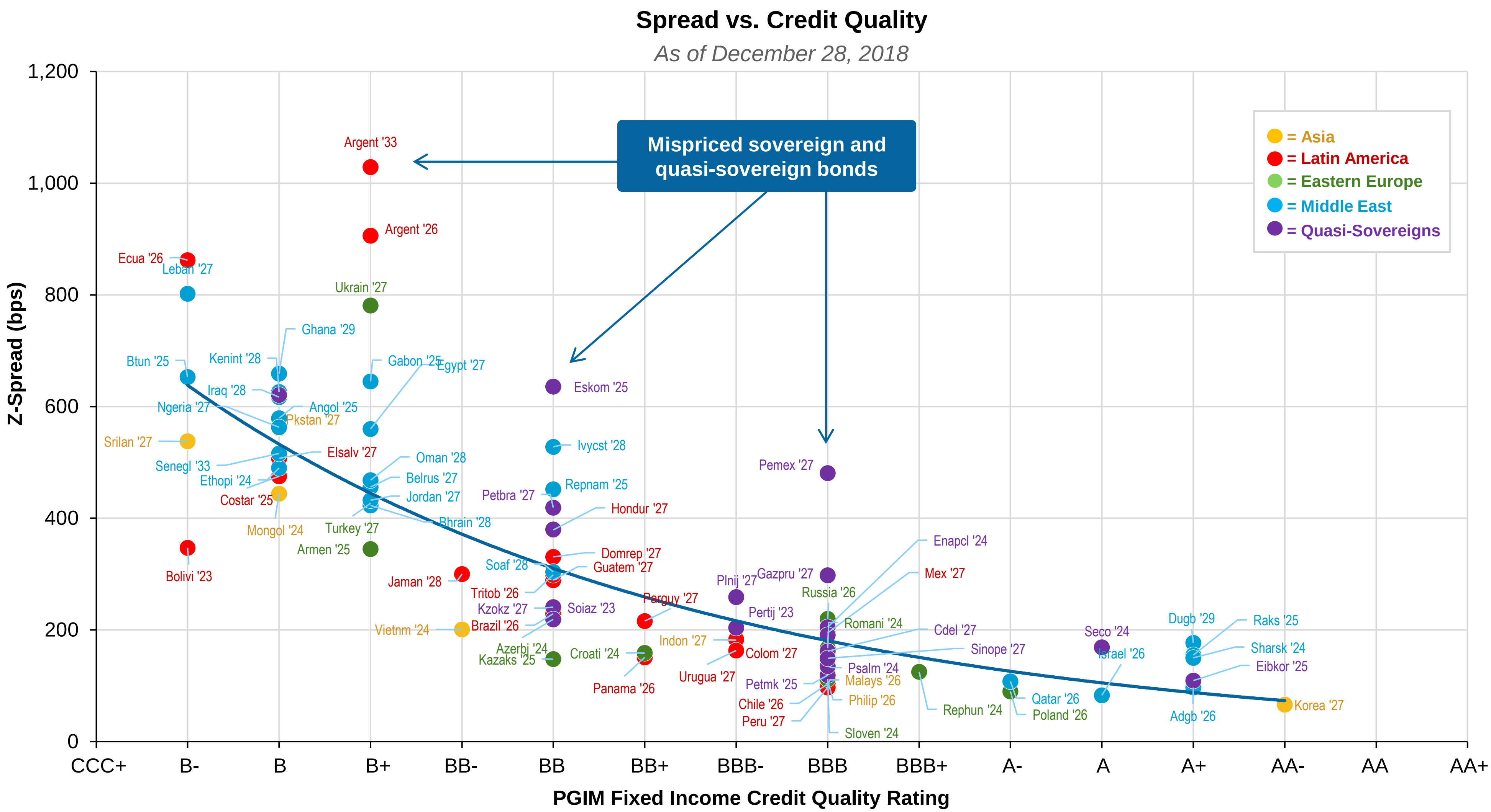
	2016	2017	2018	Current
Argentina	24.8	28.8	59.3	49.5
Brazil	13.8	7.1	6.5	6.5
Mexico	5.5	7.1	8.1	8.3
China	4.4	4.4	4.4	4.4
India	6.3	6.0	6.5	6.3
Indonesia	4.8	4.3	6.0	6.0
Russia	10.0	8.0	7.6	7.8
South Africa	7.0	6.8	6.8	6.8
Turkey	8.0	8.0	24.0	24.0
Emerging Markets	6.0	5.5	6.8	6.7

EM Inflation (12-Month, Percent)
As of February 2019

	2016	2017	2018	Current
Argentina	--	24.8	47.6	49.3
Brazil	6.6	2.1	3.4	4.0
Mexico	3.4	6.8	4.8	3.9
China	2.1	1.7	1.8	1.6
India	3.4	5.2	2.0	2.5
Indonesia	3.1	3.7	3.2	2.6
Russia	5.3	2.5	4.3	5.3
South Africa	7.0	4.4	4.4	3.9
Turkey	8.4	11.8	20.2	19.7
Emerging Markets	3.3	3.1	3.2	2.9

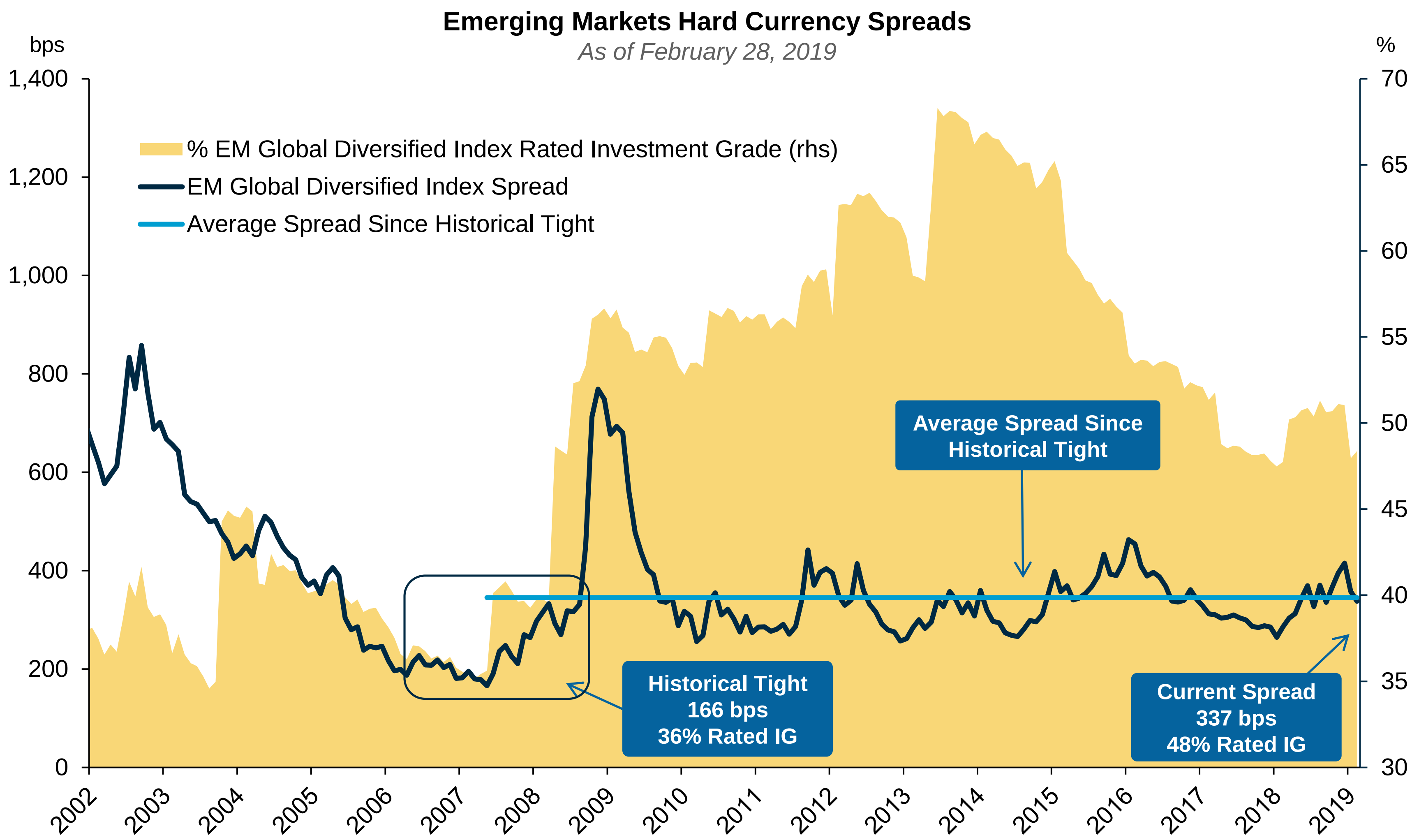
Source: Haver, PGIM Fixed Income. Note: Values are as of year-end.

Hard Currency Relative Value Opportunities Abound



Source: PGIM Fixed Income. Z-Spreads represent normalized yields in the 10-year tenor (where available) and are as of December 31, 2018. Source: Bloomberg. Ratings are shown in S&P comparative format and are as of December 2018. Provided for discussion purposes solely as an illustration of our issuer evaluation process and of the output of PGIM Fixed Income's proprietary models. Does not constitute a recommendation regarding the merits of investing in the securities of any of the issuers referenced. The sample model output provided above may not be representative of PGIM Fixed Income's current views regarding the issuers discussed, does not constitute investment advice, and should not be used as the basis for any investment decision. Does not constitute a representation that PGIM Fixed Income has purchased or would purchase any securities of the issuers referenced or that an investment in any securities of such issuers would be profitable. An investment cannot be made in a model. There can be no assurance that the model will be effective in evaluating issuers or securities or that opportunities identified by the model can be effectively implemented.

Emerging Markets Spreads Still Attractive Given Level of Credit Risk



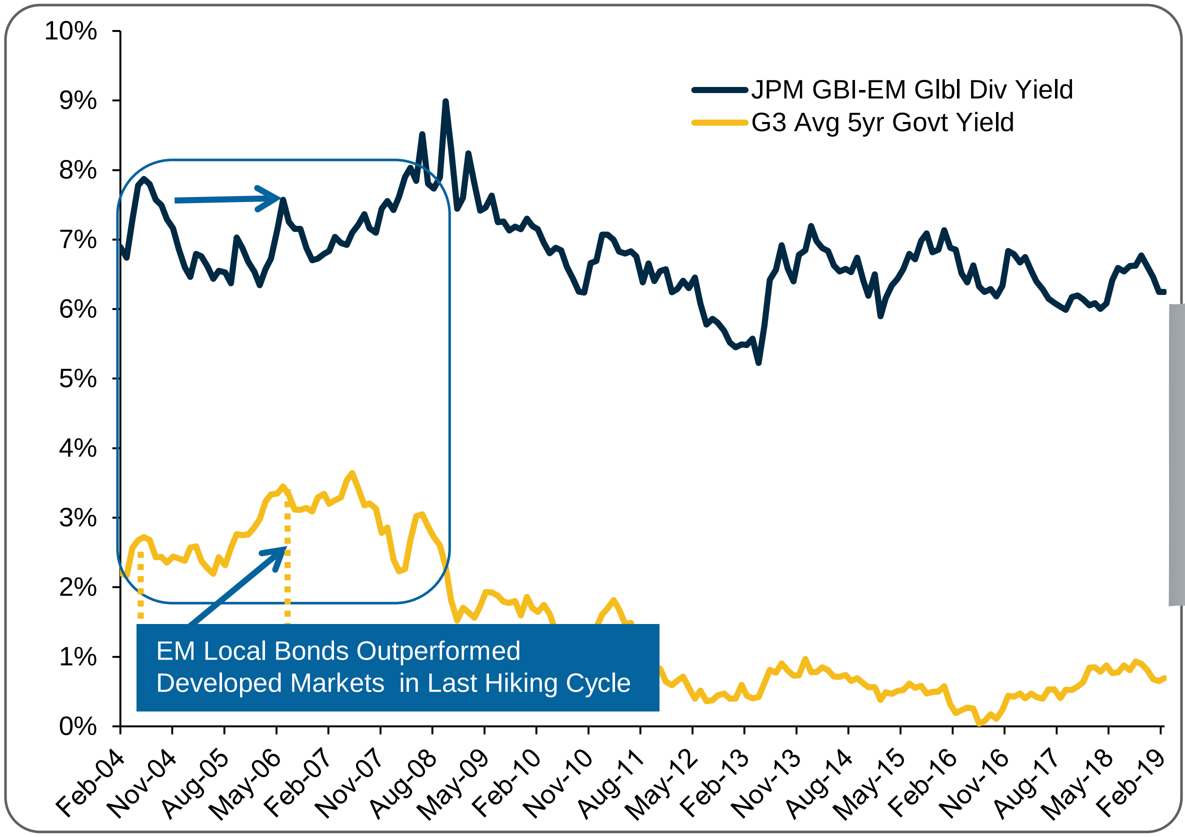
Source: Bloomberg.

Emerging Markets Debt—Yields

Local Bond Yields Are Still Wide Compared to Developed Markets

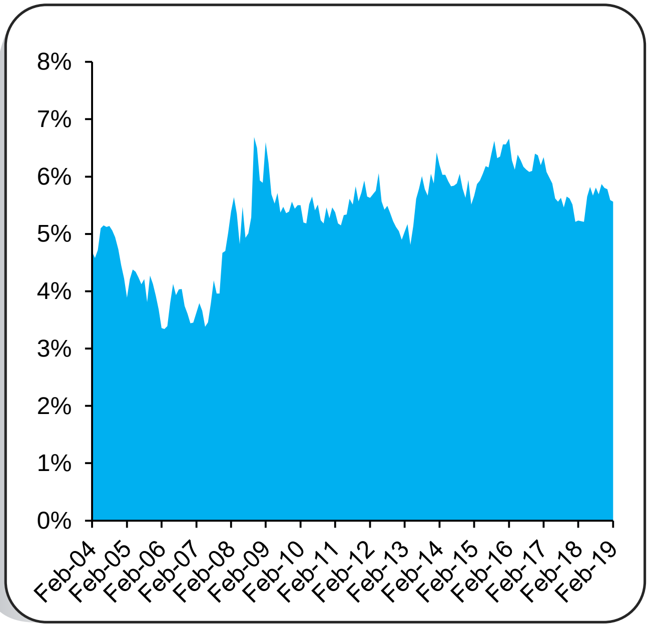
Emerging Markets Yields vs. 5-Year G3 Government Yield

As of February 28, 2019



Yield Differential

As of February 28, 2019

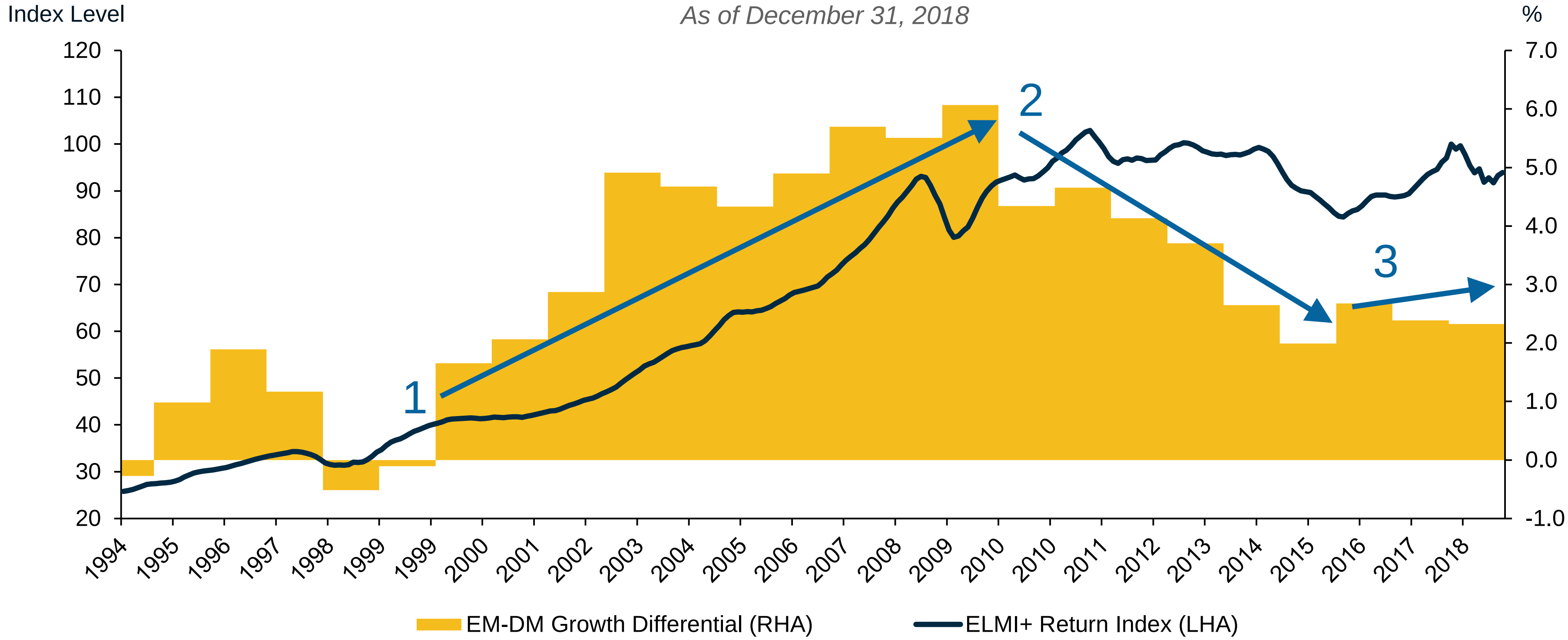


Past performance is not a guarantee or a reliable indicator of future results. Please see Reference for important disclosures regarding the information contained herein. *All investments involve risk, including the possible loss of capital. Source: Bloomberg. An investment cannot be made directly in an index. J.P. Morgan index information has been obtained from sources believed to be reliable but J.P. Morgan does not warrant its completeness or accuracy. The Index is used with permission. The Index may not be copied, used, or distributed without J.P. Morgan's prior written approval.*

EM-DM Growth Differential Has a Strong Influence on Emerging Markets FX Performance

Emerging Markets/Developed Markets Growth Differential Compared to Emerging Markets FX Index Levels

As of December 31, 2018



1 **1999-09:** Widening Growth Differential / EM FX Trends Higher

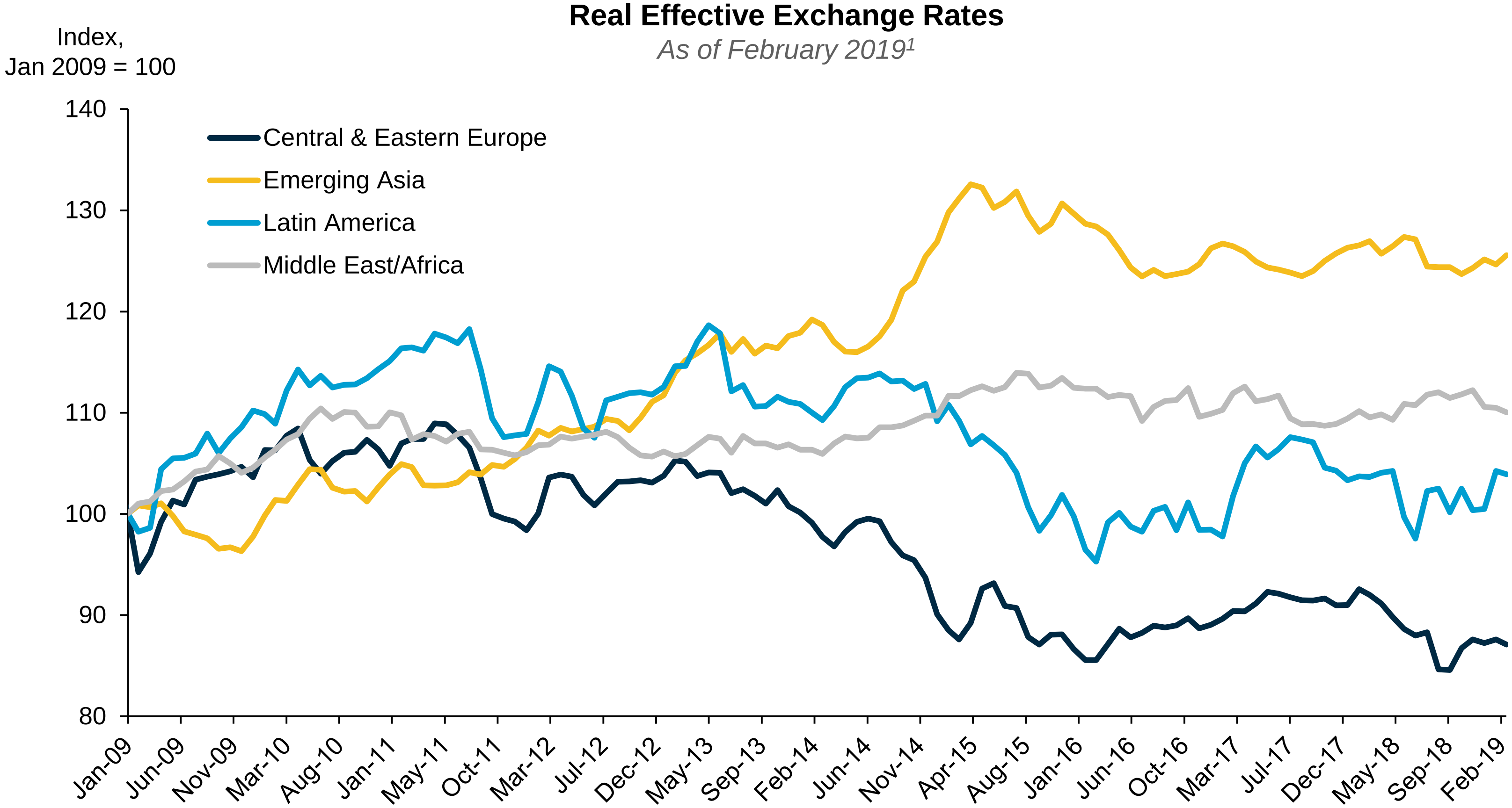
2 **2010-15:** Narrowing Growth Differential / EM FX Trends Lower

3 **2016-18:** Mixed Growth Differential/EM FX Trends Mixed

Source: IMF, JP Morgan Bloomberg and PGIM Fixed Income. Information has been obtained from sources believed to be reliable but J.P. Morgan does not warrant its completeness or accuracy. The Index is used with permission. The Index may not be copied, used, or distributed without J.P. Morgan's prior written approval. *An investment cannot be made directly in an index.*

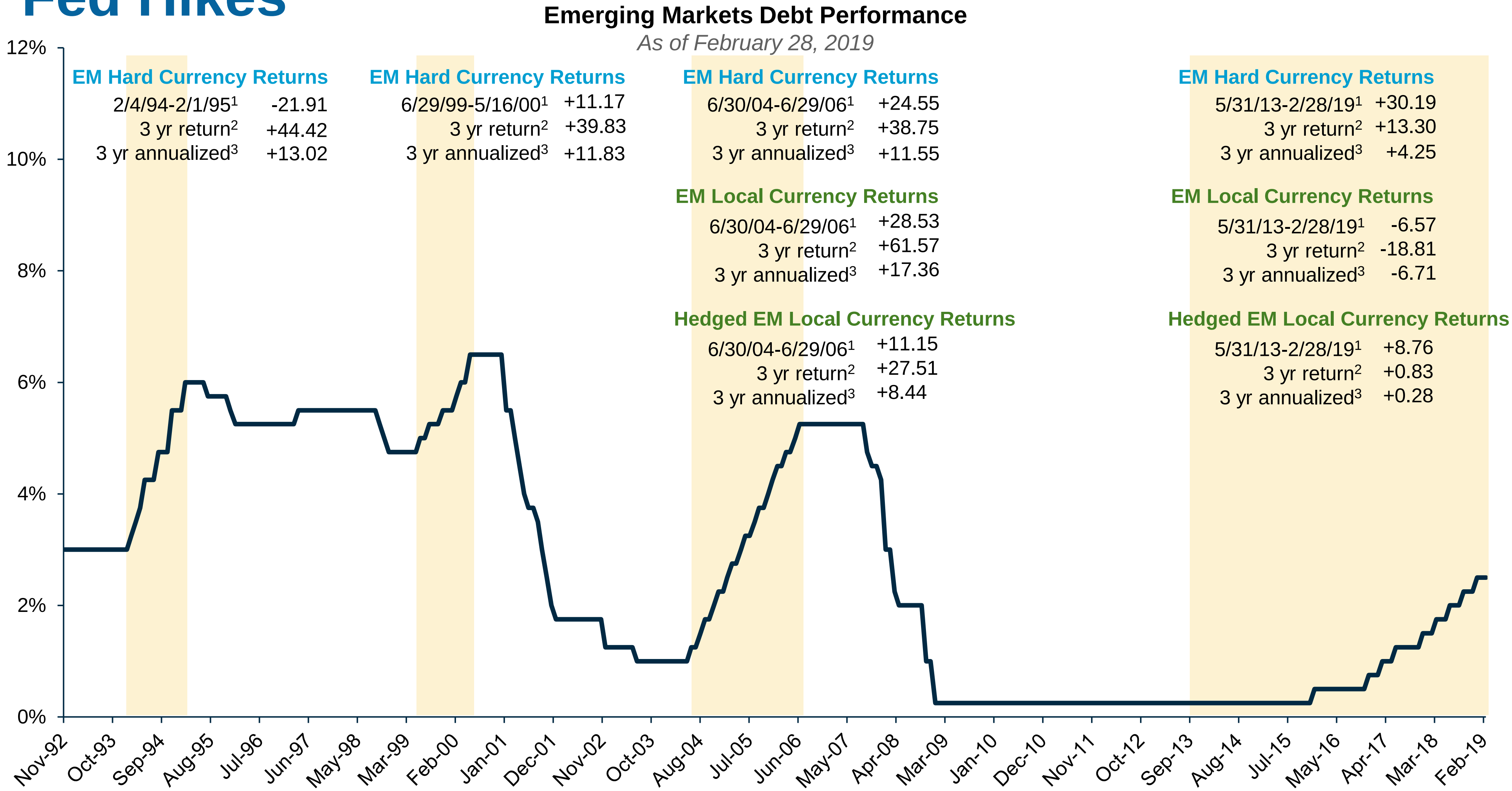
Latam and EMEA Currencies Look Relatively Cheap

Real Effective Exchange Rates
As of February 2019[1]



Source: IMF, JPM, PGIM Fixed Income. [1]February is an estimate from JP Morgan.

Emerging Markets Debt Has Outperformed Despite Fed Hikes



Past performance is not a guarantee or reliable indicator of future results. Please see the Reference section for important disclosures. *The value of investments can go down as well as up. Where overseas investments are held the rate of currency exchange may cause the value of investments to fluctuate. If applicable, investments in emerging markets are by their nature higher risk and more volatile than those inherent in some established markets and non-USD securities are converted to USD using spot rate conversion. All return periods longer than one year are annualized. Source: Bloomberg, Federal Reserve. Hard currency represents the performance of the JPM EMBI Global Diversified Index. Local Currency represents the performance of the JPM GBI-EM Global Diversified Index. J.P. Morgan index information has been obtained from sources believed to be reliable but J.P. Morgan does not warrant its completeness or accuracy. The Index is used with permission. The Index may not be copied, used, or distributed without J.P. Morgan's prior written approval. Copyright 2019, J.P. Morgan Chase & Co. All rights reserved. An investment cannot be made directly in an Index. [1]Represents total return during hiking process [2]Represents 3-year total return post first hike [3]Represents 3-year annualized return post first hike.*

5 Reference

Diversity and Inclusion Priorities

- **Development of a Brand Committed to a Diverse and Inclusive Culture**
  - Sponsor and participate in leading organizations that support the advancement of exceptional diverse talent
- **Attract, Develop, Retain and Promote Diverse Talent**
  - PGIM Fixed Income externships
  - Accelerated interview days for diverse candidates
- **Partner Across PGIM Businesses To Enhance Diversity Plans**
  - Executing on strategies developed by a Diversity Think Tank
  - Expanding scope and reach of Women’s Advisory Council
- **Pass Culture to Next Generation**
  - PGIM Fixed Income Culture Club—team of senior leaders established to further develop a culture that embodies our values and beliefs
    - Hear employees’ ideas and experiences
    - Provide robust and specific feedback
    - Establish a level of trust and commitment to foster positive changes in our culture
  - Culture Corner—Portion of PGIM Fixed Income intranet site dedicated to promoting a working environment that is collaborative, inclusive, and shares the unique experiences of our employees

PFI's Commitment To Diversity and Inclusion

- **Diversity and inclusion are an integrated part of the Prudential Financial, Inc. (PFI)* culture, community engagement and business performance**

- **PFI's Office of Diversity and Inclusion supports this goal**

- **2017 Awards and Accolades:**
  - National Organization on Disability (NOD) - 2017 NOD "Leading Disability Employer Seal"
  - Latina Style – 2018 "Company of the Year"
  - Ascend – "Excellence in Diversity & Inclusion Award"
  - USBLN – "Best Places to Work for People with Disabilities" (100% on Disability Equality Index)
  - Springboard Consulting/Disability Matters – Workforce Award for success of Count Me In! campaign
  - DiversityInc
    - Prudential Overall Ranking: #15
    - Specialty Lists/Top Companies for:
      - People with Disabilities: #5
      - Recruitment: #6
      - Veterans: #11
  - 2017 Best-of-the-Best Corporation for Inclusion by the National Gay & Lesbian Chamber of Commerce (NGLCC) and the National Business Inclusion Consortium (NBIC)
  - 2020 Women on Boards – "Winning "W" Company" (sixth consecutive year)
  - Working Mother Magazine – One of "Best Companies for Multicultural Women"
  - Human Rights Campaign (HRC) – 2017 "Best Place to Work for LGBT Equality" (100% on Corporate Equality Index for 14th consecutive year)
  - Ethisphere Institute – One of World's Most Ethical Companies (third consecutive year)
  - Seton Hall Law School – Chief Diversity Officer recognized for achievement for advancing diversity in the NJ legal community
  - Forum on Workplace Inclusion – 2017 "Winds of Change Award" in the individual category to Prudential Chief Diversity Officer
  - Latina Style 50 – Ranked #6 on 2017 Top 50 Companies for Latinas to Work

** Prudential Financial, Inc., of the United States is not affiliated with Prudential plc, which is headquartered in the United Kingdom.*

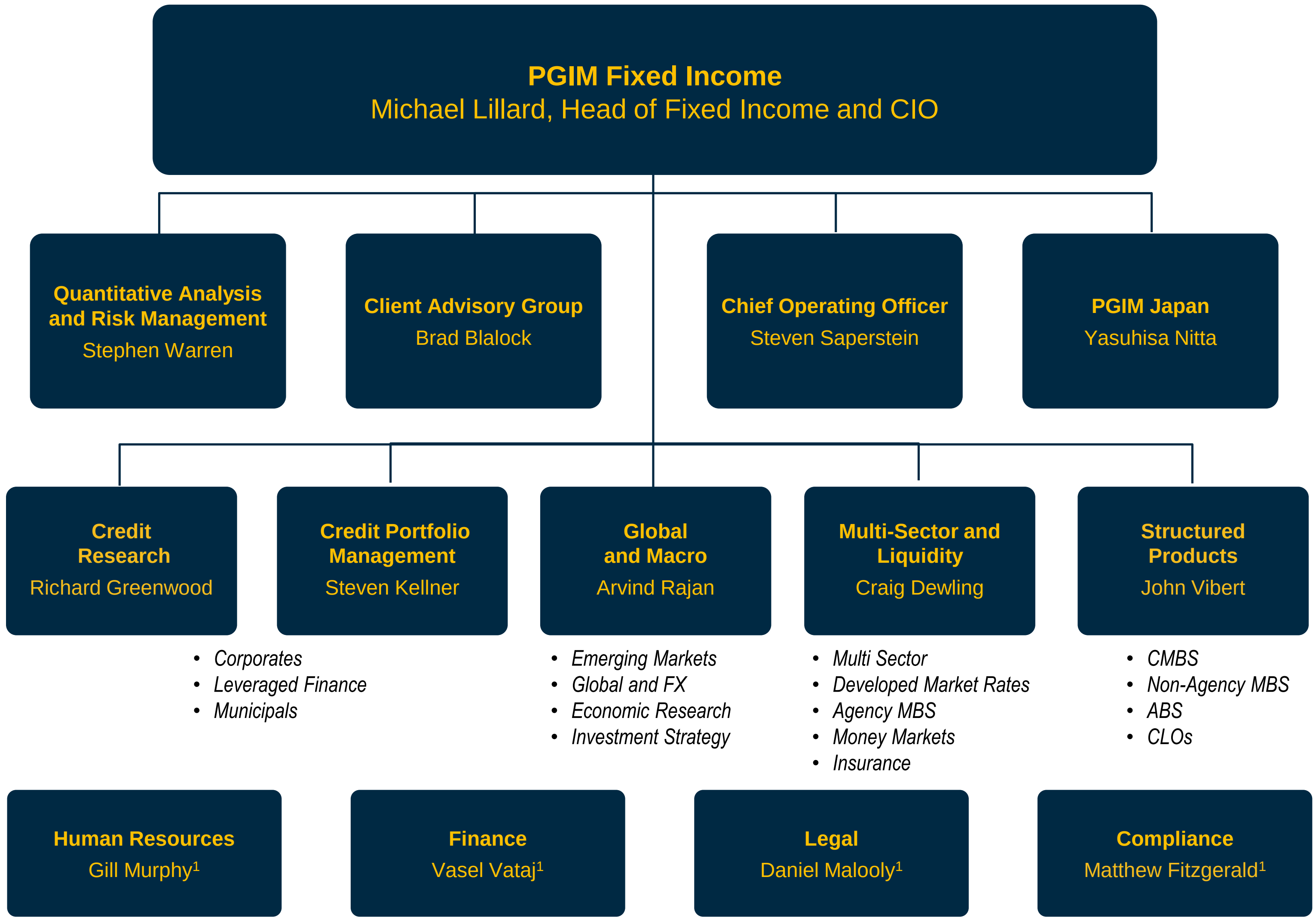
Work Force Diversity

Total Composition of Work Force
As of December 31, 2018

	African American	Hispanic	Asian or Pacific Islander	American Indian/ Alaskan Native	Two or More Races	Caucasian (Non Hispanic)	Total Employees	Percent (%) Minority	Gender	
									Male	Female
Occupation	Full Time	Full Time	Full Time	Full Time	Full Time	Full Time	Full Time	Full Time	Full Time	Full Time
Officials & Managers	12	23	55	0	1	257	**348**	**26.15%**	244	104
Professionals	15	15	33	0	4	112	**179**	**37.43%**	103	76
Technicians	0	0	0	0	0	0	**0**	**--**	0	0
Sales Workers	0	0	0	0	0	0	**0**	**--**	0	0
Office/Clerical	11	13	2	0	1	35	**62**	**43.55%**	22	40
Semi-Skilled	0	0	0	0	0	0	**0**	**--**	0	0
Unskilled	0	0	0	0	0	0	**0**	**--**	0	0
Service Workers	0	0	0	0	0	0	**0**	**--**	0	0
Other	0	0	0	0	0	0	**0**	**--**	0	0
Total	**38**	**51**	**90**	**0**	**6**	**404**	**589**	**31.41%**	**369**	**220**

Source: PGIM Fixed Income. Employee counts are expressed on a headcount basis. Employee population is made up of U.S. based Fixed Income employees.

Resourced To Specialize



[1]Dedicated functional teams that have a direct, independent reporting relationship to corporate senior management of the company.
As of March 2019.

Fourth Quarter Update

— Investor Trends —

- Allocations in Q4 2018 largely featured Global Multi-Sector and EMD strategies: Global Aggregate and Hard Currency mandates respectively.
- Despite market volatility, flows remained strong in Q4 with positive net flows on an aggregate basis in PGIM Fixed Income

— Thought Leadership —

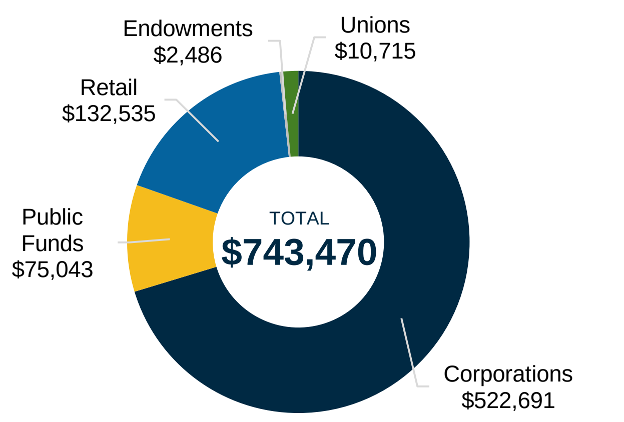
- PGIM Fixed Income's 2019 Outlook and Webinar Replay now available
- Our thoughts on the Federal Reserve's decision to raise short-term interest rates - *Trending: The Fed's Dovish Hike – But is it Enough for Markets?*
- Global Macro Matters discusses implications of the global demographic transition - *The Economics of Global Aging: Gray Skies, Rays of Policy Hope?*
- Follow PGIM Fixed Income on LinkedIn for the latest updates or visit our website www.pgimfixedincome.com to download our white papers

— Upcoming Events —

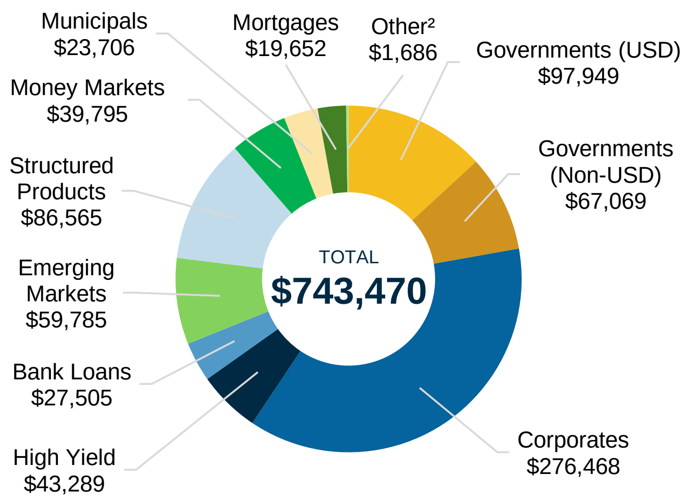
- **Investor Calls Q1 2019:**
  - Emerging Markets Debt: 6th March, 27th March
  - Core Plus: Q4 Review Call – Replay Available
- **PGIM Fixed Income Client Conferences 2019:**
  - EMEA: 25th June 2019, London
  - U.S.: 6th November 2019, New York City
  - Japan: 20th November 2019, Tokyo

4Q18 Assets Under Management[1]

By Client Type ($M)



By Sector ($M)



4Q18 Organization Updates[3]

Strategy	Title/Responsibility
New Hires	
-	-
Departures	
Emerging Markets Debt	Principal/Portfolio Manager
European Lev Finance	Principal/Credit Analyst

— Regulatory Initiatives[4] —

- **China Bond Connect** – China will be added to certain Bloomberg Barclays indexes in April 2019. Eligible PGIM Fixed Income clients must be registered with the PBoC via Bond Connect to access the local China markets
- **Brexit** – Our planning includes the setting up of a new office in Amsterdam, the Netherlands
- **FINRA Rule 4120** – requires Master Securities Forward Transaction Agreements (MSFTA) in place by 25th March 2020 to meet new margin requirements

Please see the Reference Section for important disclosures. *Source: PGIM Fixed Income. Data as of 31 December 2018. Subject to change. PGIM Fixed Income's AUM includes the following businesses: (i) the public fixed income unit within PGIM Limited, located in London; (ii) locally managed assets of PGIM Japan Co., Ltd. ("PGIM Japan"), located in Tokyo; and (iii) the public fixed income unit within PGIM (Singapore) Pte. Ltd., located in Singapore. [1]Assets for PGIM Fixed Income as of 31 December 2018. Asset class breakdown based on company estimates and is subject to change. Totals may not sum due to rounding. [2] Other includes Japanese equities and Japanese real estate equities. [3] Principal and above.*
[4] This list of regulatory initiatives is not exhaustive and PGIM Fixed Income may be subject to other regulatory initiatives, in addition to those described herein.

Develop Comprehensive Fundamental View of Each Country

Qualitative Factors

Political Risk
Election Cycle
Strength of Support Base

Policy Consistency
Fiscal Policy
Central Bank Credibility
FX Policy

Structural Imbalances
Institutional Strengths & Weaknesses/ESG Evaluation
Capital Controls /Other Distortionary Policies
Financial Sector Health
Ability to Adjust to Shocks

COUNTRY FUNDAMENTAL VIEW

Quantitative Factors

External Solvency
External Debt, % GDP
External-Debt-to-Export Multiple
Current Account Balance, % GDP
IIP Deviation from 5 Year Average

External Liquidity
REER Deviation from 10 Year Average
FX Reserve Coverage: Months of Imports
FX Reserve Coverage: M2
FX Reserve Coverage: External Short-Term Debt

Sustainable Growth
CPI, YoY%
CPI Deviation from 5 Year Average
GDP Per Capita USD Nominal
Heritage Foundation Overall Score

Fiscal Stability
Public Debt, % GDP
Debt-to-Revenue Ratio
Primary Balance, % GDP
Public Debt Stabilizing Fiscal Gap

Financial Stability
Credit Stock, % GDP
Real Credit Growth, YoY %
Private-Sector-Credit to M2 Multiple
Regulatory Tier 1 Capital to Risk-Weighted Assets (EOP, %)

Assess Corporates vs. Sovereign Securities

Emerging Markets Fundamental Bottom-up Corporate Analysis

Do We Like the Country?
EM Sovereign Analysis

EM Sovereign Analysts Evaluate:
- Country fundamentals
- Sovereign relative value
- Supply technicals

Do We Like the Company/Quasi?
Fundamental Industry & Credit Analysis

Credit Analysts Evaluate:
- Sector outlook
- Traditional credit analysis
- Regulatory & political assessment

Is There Value?
Relative Value Analysis

Portfolio Managers Evaluate:
- Relative value vs:
  - Sovereigns
  - Developed market corporate
  - EM corporates

Corporate Credits Can Offer Attractive Yields Compared to Similar Maturity Sovereigns

Country	Sample Corporate Issuer	Corporate Rating	Corp. YTW (%)	Sovereign Rating	Sov. YTW (%)
Brazil	Brazil Integrated Oil	BB-/Ba2	4.60	BB-/Ba2	3.90
Mexico	Mexico Cement	BB	5.77	BBB+/A3	4.22
Russia	Russia Telecom	BB+/Ba2	4.24	BBB-/Ba1	3.76
India	India Technology	B+/Ba3	6.23	BBB-/Baa2	4.04

Source: Bloomberg as of December 31, 2018. Sample Issuers are shown for illustrative purposes only. Does not constitute a recommendation regarding the merits of investing in securities of any of the issuers referenced therein or a complete listing of issuers analyzed. The samples provided above may not be representative of PGIM Fixed Income's current views regarding the countries discussed, shall not constitute investment advice, and should not be used as the basis of any investment decision. Does not constitute a representation that PGIM Fixed Income would purchase any securities of the countries referenced or that an investment in any securities of such countries would be profitable.

Local Rates Positioning Driven by Inflation, Central Bank Policy, and Market Technicals

Emerging Market Rates Relative Value

As of February 1, 2019

	PGIM Economist Forecasts							Market Pricing							Local Rates Positioning				
	Inflation			Central Bank Policy				Market Rates							Current Rating				
	CB infl target	INFL Current	INFL T+1 Y	CB Credibility (ahead/ behind?)	Policy Rate	Next Move	Est. Policy T+1 Y	Implied Policy T+1 Y	3M FWD Implied FX	2 YR Rate	5 YR Rate	10 YR Rate	Longest Rate	Longest Maturity	2Yr Rate	5Yr Rate	10Yr Rate	Longest Rate	Overall
Sample Latam Relative Value																			
Brazil	**4%+/-1.5%**	**3.75**	**4.00**	**Neutral**	6.50	unchg	7.25	6.88	2.29	7.33	8.03	8.76	8.76	2029	3	7	5	NA	**6**
Mexico	**3% +/-1%**	**4.83**	**3.90**	**Neutral**	8.25	unchg	8.50	7.83	5.58	8.21	8.18	8.42	8.74	2047	3	5	7	5	**6**
Sample Asia Relative Value																			
Indonesia	**3.5-5.5%**	**2.82**	**3.00**	**Neutral**	6.00	unchg	6.25	N/A	5.71	7.04	7.71	7.83	8.86	2048	4	5	5	6	**6**
Malaysia	**2.5-3.5%**	**0.20**	**1.30**	**Neutral**	3.25	unchg	3.25	3.13	-0.58	3.48	3.74	4.04	4.75	2048	4	5	5	5	**5**
Thailand	**1.5-4.5%**	**0.27**	**0.70**	**Neutral**	1.75	0 bps	1.50	1.50	-0.73	1.71	2.10	2.40	3.22	2046	3	4	3	7	**5**
Sample EMEA Relative Value																			
Poland	**1.5-3.5%**	**1.10**	**2.00**	**Neutral**	1.50	unchg	1.50	1.56	-1.09	1.51	2.20	2.77	3.08	2047	2	7	4	NA	**5**
Turkey	**3-7%**	**20.35**	**12.10**	**Neutral**	24.00	unchg	16.00	16.26	21.76	17.64	15.05	13.88	13.88	2028	4	5	5	NA	**5**
South Africa	**3-6%**	**4.50**	**4.90**	**Neutral**	6.75	unchg	6.75	6.73	4.30	7.03	7.80	9.14	9.68	2048	4	5	6	4	**5**

Brazil Curve steep out to 5 years; high hedged yield

Duration Underweight ⟷ *Duration Overweight*

Source: PGIM Fixed Income. Provided for discussion purposes solely as an illustration of our security selection process and the output in our proprietary matrix. Does not constitute a recommendation regarding the merits of investing in securities of any of the issuers referenced therein or a complete listing of issuers analyzed. The samples provided above may not be representative of PGIM Fixed Income's current views regarding the countries discussed, shall not constitute investment advice, and should not be used as the basis of any investment decision. Does not constitute a representation that PGIM Fixed Income would purchase any securities of the countries referenced or that an investment in any securities of such countries would be profitable. An investment cannot be made in a matrix. There can be no assurance that the matrix will be effective in evaluating securities or that opportunities identified by the matrix can be effectively implemented.

A Trade Idea From Start To Finish

Sample Trade—Buy Ukraine Sovereign/Quasi-Sovereign

1

Global Backdrop & Portfolio Strategy

Weekly Portfolio Strategy Meeting

- Selloff in emerging markets assets after U.S. presidential election creates attractive buying opportunity

Outcome: Senior portfolio manager sets formal risk positioning by increasing spread and FX risk within each EMD strategy

Strategy	Rate Risk	FX Risk	Spread Risk
Blend	40 bps	49 bps	260 bps

2

Country Analysis

On-Going

- Regional economist visits Ukraine in December 2016, comes back more optimistic on IMF program

Outcome: Regional economists assign an internal Ukraine rating higher than agency rating

Country	Internal Rating	Average Agency Rating	Difference in Notches
Singapore	A	AAA	-5
South Korea	AA-	AA-	0
Ukraine	B-	CCC	+2

3

Asset and Security Selection

Daily

- Regional PMs determine Ukraine is mispriced relative to internal rating
- Regional PMs determine Ukraine 2023's offer best relative value on sovereign curve
- Regional PMs and credit analysts determine Exim Ukraine offers high excess spread for its incremental credit risk

Outcome: EM portfolio managers purchase Ukraine 2023's and Exim Ukraine 2025's from broker offering best price and execution. Also added to basket of emerging market currencies.

4

Risk Monitoring

Daily

- Risk team and senior portfolio manager review risk positioning

Outcome: Risk team and senior portfolio manager verify exposure to Ukraine is within risk thresholds. Through this purchase, as well as others, the team achieved its objective of increasing portfolio risk

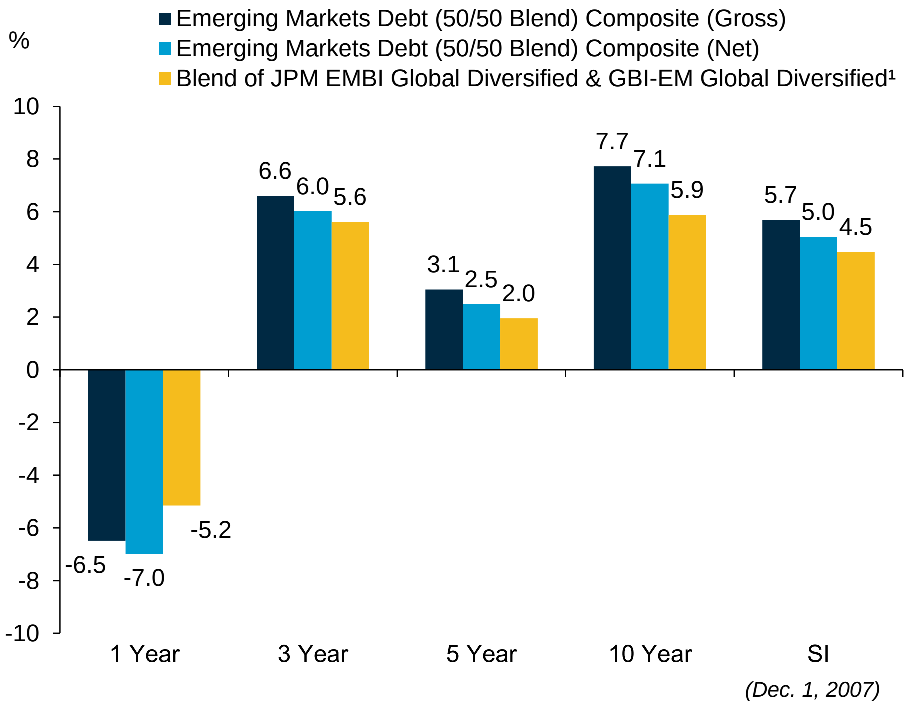
Strategy	Rate Risk	FX Risk	Spread Risk
Blend	46 bps	84 bps	295 bps

__Please see the Reference section for important disclosures.__ As of February 2018. Source: PGIM Fixed Income. Shown for illustrative purposes only. Does not constitute a recommendation regarding the merits of any investments. Does not constitute investment advice and should not be used as the basis of any investment decision. Does not constitute a representation that PGIM Fixed Income has purchased or would purchase any of the investments referenced or that any such investments would be profitable.

Investment Performance

Annualized Returns

As of December 31, 2018



Annual Returns

	Emerging Markets Debt (50/50 Blend) Composite Gross (%)	Emerging Markets Debt (50/50 Blend) Composite Net (%)	Blend of JPM EMBI Global Diversified & GBI-EM Global Diversified (%)[1]	Gross Difference (bps)
2018 YTD	-6.48	-6.99	-5.15	-133
2017	15.83	15.20	12.74	+309
2016	11.84	11.22	10.16	+167
2015	-5.60	-6.12	-7.14	+154
2014	1.63	1.08	0.71	+92
2013	-7.41	-7.92	-7.10	-31
2012	22.76	21.90	17.21	+555
2011	1.25	0.55	2.79	-154
2010	17.42	16.60	14.02	+340
2009	33.96	33.03	25.99	+797
2008	-12.72	-13.33	-8.62	-410
2007 *(Dec. 1 – Dec. 31)*	0.64	0.58	0.41	+23

Past performance is not a guarantee or a reliable indicator of future results. Please see the Reference section for important disclosures, including risk, net returns and benchmark descriptions. *The value of investments can go down as well as up. Where overseas investments are held the rate of currency exchange may cause the value of investments to fluctuate. If applicable, investments in emerging markets are by their nature higher risk and potentially more volatile than those inherent in some established markets and non-USD securities are converted to USD using a spot rate conversion. All return periods longer than one year are annualized. Source: PGIM Fixed Income. Source of benchmark: JP Morgan. Information has been obtained from sources believed to be reliable but J.P. Morgan does not warrant its completeness or accuracy. The Index is used with permission. The Index may not be copied, used, or distributed without J.P. Morgan's prior written approval. Copyright 2019, J.P. Morgan Chase & Co. All rights reserved. [1]The benchmark for this composite is an even blend of JPM EMBI Global Diversified & GBI-EM Global Diversified.*

Argentina's Currency Crisis: The IMF and Policy Stabilization helps Reduce Broader Vulnerability

Forecast

GDP, % Year-Over-Year	2015	2016	2017	2018	2019	2020
Baseline	2.7	-1.8	2.9	-1.9	-0.6	1.5
Favorable scenario				-1.3	0.5	3.3
Pessimistic scenario				-2.4	-1.7	-0.3
External Debt, % GDP	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
Baseline	26	33	37	58	69	68
Favorable scenario				57	66	65
Pessimistic scenario				59	78	80
FX Reserves,$ bn	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
Baseline	23.4	36.3	53.0	66.4	75.1	84.1
Favorable scenario				72.4	88.1	104.2
Pessimistic scenario				61.6	53.0	39.4
Current Account Balance/GDP, %	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
Baseline	-2.7	-2.6	-4.9	-4.1	-2.8	-2.5
Favorable scenario				-3.8	-2.1	-1.8
Pessimistic scenario				-4.4	-3.7	-3.2
Gov't Debt/GDP	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
Baseline	37.4	49.7	50.4	75.1	80.0	75.9
Favorable scenario				73.9	76.2	72.2
Pessimistic scenario				76.7	89.5	90.5
Overall Fiscal Balance, % GDP	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
Baseline	-6.2	-5.8	-6.0	-5.1	-2.7	-2.4
Favorable				-4.8	-1.7	-1.3
Pessimistic				-5.7	-5.5	-7.5
Primary Balance, % GDP	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
Baseline	-4.1	-4.2	-3.8	-2.6	0.0	1.0
Favorable				-2.4	0.8	1.7
Pessimistic				-3.1	-2.5	-3.6

Economic and Fundamental Backdrop

- The volatility in Argentina that began in a pronounced way in April has both idiosyncratic and global contagion components. Clearly, the Macri government is suffering from a confidence crisis: in spite of the announced $50B plus IMF program that would be front loaded to cover a significant part of Argentina's external financing needs through 2019, financial assets continued to selloff and underperform through August. This has changed in September.
- To anchor confidence, the government has agreed to tighten fiscal further by committing to a primary fiscal balance next year and a surplus in 2020. The central bank hiked rates considerably to 60%. While the IMF program was designed to help Argentina roll over external market funding needs for 2018 and 2019, the program requires local debt rollovers. As pressure on the peso has mounted, it has become more difficult to comfortably rollover debt and finance Argentina's fiscal deficit and local maturities. With the presidential election approaching, the political and policy uncertainty has boosted the demand for dollars and contributed to the currency pressure. Inflation has jumped considerably to over 40%, and should come down to close to 25% next year. We expect rates to remain high.
- The crisis, along with a very severe drought in the 2Q, is leading to a contraction this year. Growth is expected to come down by close to -2.5%; the rebound next year is estimated anywhere between -2% to +2% from private sector economists. The weaker exchange rate and weak economy will help the current account deficit adjust from -4% to closer to -2% next year. On the capital account, stabilizing the amount of capital leaving the country will be key.
- Given the challenging global backdrop, the IMF may agree to increase and further frontload the program given the Macri government's efforts to restore macro stability. This has contributed to the rebound so far in September.

PGIM Fixed Income Outlook

- We believe the markets are too pessimistic in their assessment of Argentina's solvency and external liquidity health, and value exists in select assets. We remain invested in short maturity hard currency sovereign and quasi-sovereign bonds, as well as in longer-maturity euro denominated bonds that trade very wide to dollar bonds. Importantly, these are not local law bonds. Given the more uncertain outlook for local bonds, we are cautious in our allocation to local assets. We are closely following local rollovers to signal further improvement in investor sentiment.

Source: PGIM Fixed Income. As of September 2018. The baseline scenario assumes a rebound of economic activity bolstered by an improved investment environment and heightened confidence, along with continued access to capital markets. The favorable scenario assumes a robust recovery of activity driven by the strong performance of investment and consumption, which allows authorities to outdo fiscal targets. The pessimistic scenario assumes negligible progress in the fiscal front amid an adverse political backdrop, disappointing results from the tax amnesty, stubborn inflation, a more subdued recovery, depressed confidence and more limited capital inflows. Does not constitute investment advice and should not be used as the basis for any investment decision. For informational purposes only. There can be no guarantee that these forecasts will be achieved. Please see Notice for important disclosures regarding the information contained herein.

A New Start

Forecast

GDP, % Year-over-year	2015	2016	2017	2018	2019	2020
Baseline	-3.5	-3.5	1.0	1.4	2.3	2.7
Favorable scenario				1.8	3.4	3.9
Pessimistic scenario				1.0	1.2	0.9
External Debt, % GDP	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
Baseline	30	30	27	29	28	27
Favorable scenario				29	26	24
Pessimistic scenario				30	32	35
Current Account Balance, % GDP	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
Baseline	-3.3	-1.3	-0.5	-0.9	-1.4	-1.7
Favorable scenario				-0.7	-1.0	-1.2
Pessimistic scenario				-1.1	-1.9	-2.7
FX Reserves, $ bn	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
Baseline	354.2	362.5	371.2	378.5	381.7	382.9
Favorable scenario				386.0	401.4	418.9
Pessimistic scenario				375.5	357.7	332.5
Gov't Debt/GDP, %	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
Baseline	72.6	78.4	84.0	87.6	88.6	89.2
Favorable scenario				87.3	87.0	85.8
Pessimistic scenario				88.7	92.4	96.8
Primary Fiscal Balance, %GDP	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
Baseline	-2.0	-2.5	-1.7	-1.5	-1.2	-1.0
Favorable scenario				-1.3	-0.8	-0.3
Pessimistic scenario				-2.1	-2.4	-2.8
Overall Fiscal Balance, % GDP	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
Baseline	-10.3	-9.0	-7.8	-7.3	-6.7	-6.5
Favorable scenario				-7.1	-6.3	-5.6
Pessimistic scenario				-7.9	-8.7	-9.7

Economic Backdrop

- Right-wing President Jair Bolsonaro was sworn in on Jan. 1st. The new congress, in which center-right and right-wing parties are slated to increase their cohorts at the expense of the traditional parties—a reflection of the underlying anti-establishment sentiment that characterized the recent electoral cycle—will take office in early February. We expect the Bolsonaro administration to push for an overall market-friendly agenda that includes addressing Brazil's pressing fiscal shortcomings and fostering Brazil's competitiveness. A material pension reform is paramount to improve Brazil's medium- and long-term fiscal outlook, as the ongoing consolidation effort is insufficient to stabilize the debt trajectory. Our working hypothesis is that after a potentially bumpy political process, a reasonable reform will be adopted by year-end. Early signals coming from the government have been generally positive, as they suggest that the administration is actually prioritizing the political groundwork required to advance a sensible reform through the legislature. Other supply-side reforms that will likely be in the pipeline down the road include privatizations, deregulation, and simplifying Brazil's intricate tax regime.
- Cyclical and structural factors have improved the inflation outlook materially. This development allowed the CB to inject significant monetary stimulus. We reckon that monetary conditions will likely start to be normalized this year given the lingering external (trade, commodity prices, Fed) and domestic (reforms) risks that could prompt the CB to adjust its monetary stance to shore up the benign inflation outlook. We acknowledge, however, the non-negligible likelihood that favorable developments on those fronts could provide the CB with the leeway to preserve the monetary accommodation for longer amidst ample slack in the economy.
- For 2019, we envision a macroeconomic picture featuring a moderate acceleration of growth to ~2.3% (from ~1.4% in 2018); continued fiscal consolidation at a gradual pace (though insufficient to arrest the rising debt-to-GDP ratio); and the maintenance of a solid external position anchoring Brazil's creditworthiness, thereby mitigating concerns over the economy's fundamental outlook.
- The risks for Brazil's credit ratings appear, at this juncture, skewed to the upside. Downgrades seem unlikely owing to the constructive view of the reform outlook; that said, failure to adopt a pension reform would likely lead to additional downgrades. In our view, the prospect for upgrades could start gaining traction on a 12-24 month horizon, after policymakers deliver an acceptable pension reform, fiscal accounts show further tangible signs of improvement, and governability remains stable.

PGIM Fixed Income Outlook

- With respect to our investment stance, Brazilian hard currency assets are well insulated against the risk of policy implementation given the sovereign's strong external solvency and liquidity indicators, have considerably outperformed the broader market over the last year, and we are currently overweight Brazilian credit (with a focus on select quasi sovereign and corporate bonds). Moreover, because of the fundamental structural improvements that we foresee, it appears as if the groundwork is being laid for an environment of permanently lower interest rates, a more stable and improved investment climate and potentially higher economic growth; all of which should be positive for the US$/BRL cross as well as local duration.

Source: PGIM Fixed Income. Forecast as of September 2018. Commentary as of January 2019. The baseline scenario assumes a continued recovery of economic activity, chiefly bolstered by private consumption, a very gradual fiscal consolidation path and supportive capital flows. The favorable scenario assumes a stronger recovery of the economy, further boosted by investment and net exports, that is conducive of a mildly more aggressive fiscal consolidation trajectory that outperforms targets. The pessimistic scenario assumes more defensive consumption and investment patterns as the deterioration of the political environment stalls any efforts to shore up the fiscal accounts in the midst of the electoral cycle, thus weighing negatively on confidence, growth, capital flows and credit ratings. Does not constitute investment advice and should not be used as the basis for any investment decision. For informational purposes only. There can be no guarantee that these forecasts will be achieved. Please see Notice for important disclosures regarding the information contained herein.

Growth, Fiscal Performance and Politics

Forecast

GDP, % Year-over-year	2015	2016	2017	2018	2019	2020
Baseline	3.3	2.3	2.0	2.0	2.3	2.3
Favorable scenario				2.5	3.2	3.4
Pessimistic scenario				1.5	1.2	0.8
External Debt, % GDP	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
Baseline	36	39	38	37	37	36
Favorable scenario				36	35	32
Pessimistic scenario				39	41	43
Current Acct. Balance, % GDP	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
Baseline	-2.6	-2.2	-1.7	-1.9	-2.3	-2.9
Favorable scenario				-1.8	-2.1	-2.4
Pessimistic scenario				-2.1	-2.7	-3.2
FX Reserves, $ bn	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
Baseline	173.5	173.5	170.5	174.7	172.5	168.3
Favorable scenario				179.2	187.0	195.5
Pessimistic scenario				169.3	154.6	141.6
Gov't Debt/GDP, %	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
Baseline	46.5	48.7	46.0	45.0	45.2	46.2
Favorable scenario				44.3	43.2	42.0
Pessimistic scenario				46.3	48.7	52.9
Primary Fiscal Balance, % GDP	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
Baseline	-1.2	-0.1	1.4	0.8	0.4	0.1
Favorable scenario				0.9	0.8	0.8
Pessimistic scenario				0.7	-0.3	-1.3
Fiscal Balance, % GDP	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
Baseline	-4.0	-3.0	-1.1	-2.0	-2.6	-2.9
Favorable scenario				-1.9	-2.0	-2.0
Pessimistic scenario				-2.1	-3.5	-4.8

Economic Backdrop

- Mexico has weathered the headwinds from domestic and external risks better than anticipated. Trump, NAFTA and policy implementation concerns still exist, but the worst case scenarios have diminished.
- The biggest uncertainty is how the Andrés Manuel López Obrador (AMLO) government will impact policy over the medium term.
- The current government's fiscal consolidation sent a positive signal of fiscal discipline. There are institutional safeguards to protect from major policy shifts in fiscal and in energy in the short-term. The medium term outlook is less certain.
- Inflation has peaked, but Banxico may be cautious with rate cuts in the face of policy and market uncertainty.

PGIM Fixed Income Outlook

- Mexican external and local bonds and the currency have out performed this year.
- The better expectations with regard to NAFTA have helped the currency and local bonds. Uncertainty regarding the energy reform and policy more broadly seems to be more priced into quasi-sovereign bonds than with sovereign bonds.
- Local bonds have not priced in potential rate cuts. We believe the curve is attractive along the 7 year and longer end of the curve given roll down and steepness. We foresee long term value in FX, but are cautious in the short term given broader market volatility.

Source: PGIM Fixed Income. As of September 2018. The scenarios differ in the magnitude of the impact brought about by the crystallization of one or more risks mentioned above. For 2016-17, the baseline, favorable and pessimistic scenarios assume an average price of oil of $45 and $50/bbl, $50 and $60/bbl, and stable at $40/bbl throughout the period, respectively. Does not constitute investment advice and should not be used as the basis for any investment decision. For informational purposes only. There can be no guarantee that these forecasts will be achieved. Please see Notice for important disclosures regarding the information contained herein.

A Challenging Transition

Forecast

GDP, % Year-over-year	2014	2015	2016	2017	2018	2019
Baseline	7.3	4.8	7.7	7.4	6.3	6.3
Favorable scenario	7.3	4.8	7.7	7.4	6.2	5.6
Pessimistic scenario	7.3	4.8	7.7	7.4	5.9	-0.8

Current Account Balance, % GDP	2014	2015	2016	2017	2018	2019
Baseline	2.2	2.8	1.8	1.4	1.2	0.0
Favorable scenario	2.2	2.8	1.8	1.4	1.4	-0.4
Pessimistic scenario	2.2	2.8	1.8	1.4	3.5	0.9

FX Reserves, $ bn	2014	2015	2016	2017	2018	2019
Baseline	3,843	3,330	3,011	3,134	3,000	2,700
Favorable scenario	3,843	3,330	3,011	3,134	3,200	3,500
Pessimistic scenario	3,843	3,330	3,011	3,134	2,900	2,000

Gov't Debt/GDP, %	2014	2015	2016	2017	2018	2019
Baseline	62	69	76	82	90	98
Favorable scenario	62	69	76	82	85	85
Pessimistic scenario	62	69	76	82	100	126

Economic Backdrop

- Potential growth has sharply declined, and efforts to boost headline growth in line with official growth targets have resulted in overbuilding, excess capacity and very high leverage.
- Even though policy makers have for a long time recognized the key importance of SOE reforms and capacity cuts, very little actual follow-through has happened.
- Instead, the authorities have begun to slow-down debt reliance, offsetting the drag on demand by boosting profits through buoyant producer prices, stronger exports, and a property boom in lower-tier cities.
- Escalating trade protectionism from the U.S. is leading the authorities to ease back from deleveraging efforts and dial up stimulus measures in order to support GDP growth, a strategic reversal which will once again put in question the sustainability of the economic model.

PGIM Fixed Income Outlook

- Expect authorities to dial up debt-creating stimulus until they once more worry about sustainability later in 2018 or trade-war fears recede.
- Heightened risk of policy mistakes from selective efforts at deleveraging without structural reforms (e.g. property cooling), concentration of power and lifetime leadership pose new risks to ability to affect required course corrections in policy.
- Hard landing risks are steadily increasing along the baseline path, and a transition to the positive reform scenario will become increasingly difficult.
- Key markers for investors to follow: 1) state enterprise reform (including closure of excess capacity), 2) fiscal transfers to local governments, 3) permitting layoffs to cut capacity and defaults to redress widespread moral hazard, 4) trade-war developments, and 5) avoidance of re-newed capital account liberalization drive.
- Financial sector and capital account liberalization should have occurred only after structural reforms - the reverse sequence has increased financial instability risk and necessitated re-introduction of capital controls.
- We expect a resumption of currency weakness as the authorities seek to combat deflationary pressures and offset the negative terms-of-trade shock from tariffs.

Source: PGIM Fixed Income. As of September 2018. The baseline scenario assumes that the authorities are not initiating reforms, but attempt to secure their growth target via stimulus policies, which will eventually give rise to efforts aimed at maintaining financial stability in the face of extreme levels of leverage (the scenario assumes that a leverage ration above 300 percent of GDP is excessive and triggers financial instability). The favorable scenario assumes the initiation of a comprehensive and properly sequenced reform program. The pessimistic scenario assumes a "hard landing" with further increasing stress in the property sector leading to a series of defaults and haphazard bailouts, which spill over into concerns about banking system health; a large scale public bailout of banks; a sharp drop in monetization as economic agents are losing confidence; sharp capital flight; and imposition of restrictive controls. Does not constitute investment advice and should not be used as the basis for any investment decision. There can be no guarantee that these forecasts will be achieved. Please see Notice for important disclosures regarding the information contained herein.

External Balances Solid But Challenges Abound

Forecast

GDP, % Year-over-year	2015	2016	2017	2018	2019	2020
Baseline	-3.7	-0.6	1.5	1.8	1.9	1.9
Favorable scenario		-0.6	1.5	4.0	4.0	4.0
Pessimistic scenario		-0.6	1.5	0.0	-1.4	-1.5

Current Account Balance, % GDP	2015	2016	2017	2018	2019	2020
Baseline	5.2	2.9	1.9	3.8	3.5	3.2
Favorable scenario		2.9	1.9	5.5	5	5
Pessimistic scenario		2.9	1.9	2.9	0.7	-1.4

FX Reserves, $ bn	2015	2016	2017	2018	2019	2020
Baseline	320	395	380	410	449	489
Favorable scenario		395	380	450	460	470
Pessimistic scenario		395	380	331	262	181

Gov't Debt/GDP, %	2015	2016	2017	2018	2019	2020
Baseline	16.4	17.4	15.7	14.0	12.9	12.2
Favorable scenario		17.4	15.7	10.4	9.3	8.2
Pessimistic scenario		17.4	15.7	15.6	17.5	20.4

Economic and Geopolitical Backdrop

- Russia retains a positive current account balance, high reserve levels and low govt debt to GDP.
- Domestic demand is recovering while fiscal policy remains prudent.
- The Central Bank of Russia (CBR) has switched to a free floating RUB. Past high inflation appears to have been controlled and the CBR has embarked on a prudent pro-growth easing cycle.

PGIM Fixed Income Outlook

- The solid external position persists.
- Long-standing structural problems, compounded by existing sanctions in the short/medium term, constrain the growth outlook.
- The risk of more sanctions is real and might have serious economic impact in the medium/long term.

Source: PGIM Fixed Income. As of July 2018. The baseline scenario assumes that a peaceful solution will be ultimately reached and the political/economic relations between Russia and the West will revert to some normality. The favorable scenario assumes a swift de-escalation of current tensions and a quick return to the status-quo-ante. The pessimistic scenario assumes prolonged tensions between Russia and the West and a more "inward looking" policy on the part of Russia with larger capital outflows and a sharp decline in both potential and actual growth. Does not constitute investment advice and should not be used as the basis for any investment decision. For informational purposes only. There can be no guarantee that these forecasts will be achieved. Please see Notice for important disclosures regarding the information contained herein.

Moderate But Steady Deterioration

Forecast

Real GDP, % Year-over-year	2015	2016	2017	2018	2019	2020
Baseline	6.1	3.2	7.4	3.2	-3.2	1.1
Favorable scenario				3.2	-1.7	2.1
Pessimistic scenario				3.2	-2.5	1.2

Current Account Balance, % GDP	2015	2016	2017	2018	2019	2020
Baseline	-3.7	-3.8	-5.6	-4.4	-1.9	-0.6
Favorable scenario				-4.4	-2.5	-1.5
Pessimistic scenario				-4.4	0.2	1.5

FX Reserves, $ bn[1]	2015	2016	2017	2018	2019	2020
Baseline	92.9	92.1	84.1	68.0	68.0	74.0
Favorable scenario				68.0	70.0	78.0
Pessimistic scenario				68.0	58.0	65.0

Gov't Budget Balance (%)	2015	2016	2017	2018	2019	2020
Baseline	-1.3	-2.3	-2.3	-3.9	-3.9	-3.4
Favorable scenario				-3.9	-3.8	-3.3
Pessimistic scenario				-3.9	-4.6	-4.5

Gov't Debt/GDP, %	2015	2016	2017	2018	2019	2020
Baseline	27.6	28.3	28.5	27.6	28.1	28.4
Favorable scenario				27.6	27.7	27.8
Pessimistic scenario				27.6	29.3	30.6

Economic Backdrop

- In the **baseline scenario**, the economy avoids another large shock but is also slow to recover. Private sector deleveraging continues to curtail activity, combined with more limited foreign financing flows. The public sector refrains from sizeable stimulus, but also does not pursue consolidation. As a result, the economy re-balances and the current account deficit shrinks significantly.
- In the **favorable scenario**, the economy exits from recession much faster than expected. As a result, the current account adjustment proceeds, but to a lesser extent than in the baseline, but the fiscal accounts show some improvements.
- In the **pessimistic scenario**, the recession deepens amidst rising bankruptcies in the private sector and disappointing foreign rollovers. The external deficit closes but the fiscal balance deteriorates further as the government provides some modest stimulus.

PGIM Fixed Income Outlook

- Turkey has survived over the years despite being vulnerable to external financing needs, short-term debt rollover and a macro-economic policies that are too loose.
- The strong sovereign balance sheet has made us comfortable with sovereign, quasi-sovereign and high quality corporate debt but the lack of monetary policy response and rise in U.S. tensions earlier in the year did raise the probability of a sudden stop or crisis spurred by the weakening of the Lira.
- More recently, the extraordinary central bank hike, normalization in the relationship with the U.S., and rollover of external debt has improved our comfort level with our earlier positioning.
- Sovereign debt has performed well as a result of recent events and investor positioning and expect further spread tightening but a lot will depend on the country's ability to deliver credible economic policies given their need to continue to issue debt in capital markets.
- Constructive on Turkish Spreads given valuations but tend to prefer shorter dated quasi-sovereigns and the belly of the sovereign curve given expectations that fundamentals are still likely to deteriorate as the economy slows and the country there still are significant issuance needs.

Source: PGIM Fixed Income. As of November 2018. Does not constitute investment advice and should not be used as the basis for any investment decision. For informational purposes only. There can be no guarantee that these forecasts will be achieved. Please see Notice for important disclosures regarding the information contained herein. [1]Excluding gold.

Sound Fundamentals: Stepped-Up Growth Awaiting Further Policy Improvements

Forecast

Real GDP, % Year-over-year	2015	2016	2017	2018	2019
Baseline	4.9	5.0	5.1	5.1	4.8
Favorable scenario				5.0	5.5
Pessimistic scenario				5.2	4.3

Current Account Balance, % GDP	2015	2016	2017	2018	2019
Baseline	-2.0	-1.8	-1.7	-2.6	-1.9
Favorable scenario				-2.5	-1.6
Pessimistic scenario				-2.7	-2.4

FX Reserves, $ bn	2015	2016	2017	2018	2019
Baseline	105.9	116.4	130.20	115.0	130.0
Favorable scenario				120.0	150.0
Pessimistic scenario				105.0	90.0

Gov't Debt/GDP, %	2015	2016	2017	2018	2019
Baseline	27.5	28.3	28.8	28.7	28.6
Favorable scenario				28.6	28.3
Pessimistic scenario				29.6	30.0

Government Balance (%GDP)	2015	2016	2017	2018	2019
Baseline	-2.6	-2.5	-2.3	-1.9	-2.0
Favorable scenario				-1.8	-1.5
Pessimistic scenario				-2.4	-3.0

Economic Backdrop

- Restored macroeconomic balance, favorable demographics, and improved policy making have steadied growth and investor concerns. A sound fiscal anchor and boosted central bank credibility are key fundamental strengths.
- Further improvement in growth prospects to harness the demographic dividend will require stepped up reforms (e.g. subsidy rationalization, better business and investment environment) without risking sound fiscal and monetary policy.
- A better business environment—notably for foreign investors—is key to boost investment and growth, but authorities remain bound by nationalist approach.

PGIM Fixed Income Outlook

- Solid fundamentals and policy making--rather than sudden reform bursts--are the underpinnings of Indonesia's favorable outlook. That said, an acceleration of reform would result in higher growth; the converse is true if sound macroeconomic policy making is abandoned.
- It will be important that the authorities' stepped up infrastructure plan observe the fiscal rule limiting budget deficits to three percent of GDP.
- We expect pro-reform forces to prevail at the next Presidential elections. Even an opposition upset would unlikely dent the favorable macroeconomic setting, given institutional constraints.
- We are constructive on Indonesia sovereign on favorable fundamentals and supportive technicals at current valuations.
- We favor long-end sovereigns and select quasi sovereigns particularly in the belly of the curve.

Source: PGIM Fixed Income. As of December 2018. The baseline scenario assumes that current macroeconomic policy mix is sustained within an unchanged global environment. The favorable scenario assumes a re-acceleration of the fiscal reform momentum, as well as structural reform to improve the business and investment environment. The pessimistic scenario assumes adoption of an investor-unfriendly domestic-demand-led development program, and eroding fiscal and monetary policy. Does not constitute investment advice and should not be used as the basis for any investment decision. For informational purposes only. There can be no guarantee that these forecasts will be achieved. Please see Notice for important disclosures regarding the information contained herein.

Recovery Amidst Continued Adjustment and Latent Domestic and External Risks

Macro Economic Indicators – Quantitative

As of February 28, 2019

	GDP Growth 2018 Est.	Public Sector Debt/GDP 2018 Est.	Budget (Primary Balance) 2018 Est.	Current Account Balance 2018 Est.	Foreign Direct Investment 2018 Est.	Total Ext Debt/GDP 2018 Est.	Reserves 2018 Est. (Billion USD)
Argentina	-1.9%	75.1%	-2.6%	-4.1%	1.9%	58%	66
Brazil	1.4%	87.6%	-1.5%	-0.9%	3.4%	29%	378
Chile	2.7%	25.3%	-1.8%	-2.0%	2.5%	65%	40
Colombia	3.2%	42.8%	-1.0%	-3.4%	3.0%	42%	53
Mexico	2.0%	45.0%	0.8%	-1.9%	2.2%	37%	175
Peru	4.0%	28.0%	-2.1%	-2.0%	3.2%	35%	64
Venezuela	-4.5%	95%	-12.5%	0.5%	0.1%	160%	5

- Fiscal position remains the key vulnerability in Brazil. Election outcome is important to scope and timing of future reforms.
- Mexican economy is exposed to changes of trade policy in the US. If any, deterioration of fundamentals stemming from the implementation of Andrés Manuel López Obrador’s (AMLO) policy agenda will likely remain contained in the short term.
- For IG issuers, fiscal imbalances are manageable, but still need structural reforms & infrastructure investment for longer-term competitiveness.
- Current Account deficits funded in part by FDI; weaker FX will likely help external balances. Region is sensitive to commodity prices and the performance of the Chinese economy.
- Relatively accommodative monetary conditions in Brazil, Chile, Colombia and Peru. Argentina and Mexico have adopted a tighter stance as a response to shocks.
- Idiosyncratic risks in Venezuela being largely reflected in asset prices.

Source: PGIM Fixed Income, BAML, Barclays, Citi, Credit Suisse, Deutsche Bank, Goldman Sachs, IMF, Itau and Torino Capital. For informational purposes only. Estimates are not guaranteed and are subject to change. Does not constitute a recommendation regarding the merits of any investments. Does not constitute investment advice and should not be used as the basis for any investment decision. Past performance is not a guarantee or a reliable indicator of future results. Please see Notice for important disclosures regarding the information contained herein.

Will Trade Wars Dent Solid Growth?

Macro Economic Indicators – Quantitative

As of February 28, 2019

	GDP Growth 2018 Est.	Public Sector Debt/GDP 2018 Est.	Budget (Primary Balance) 2018 Est.	Current Account Balance 2018 Est.	Foreign Direct Investment 2018 Est.	Total Ext Debt/GDP 2018 Est.	Reserves 2018 Est. (Billion USD)
China	6.3%	90%	-9.1%	1.2%	0%	15%	3,000
India	7.1%	70.9%	-2.3%	-2.5%	0.6%	23%	370
Indonesia	5.0%	28.4%	-0.2%	-2.5%	1.4%	34%	110
Malaysia	4.5%	54%	-1.3%	3.0%	-1.4%	70%	87
Philippines	6.3%	34.5%	1.4%	-2.1%	-0.3%	25%	77
Korea	2.7%	39.3%	1.3%	4.4%	1.0%	26%	390
Thailand	3.8%	40.6%	0.1%	7.3%	0.0%	31%	200

- Regional growth differences are stabilizing just as protectionist risks are flaring up.
- As China is the prime target for higher U.S. tariffs; growth drag will likely spill over and Asia will have to hope for global growth drivers to hold up well, as its own ability to boost domestic demand is not unlimited, given debt burdens from past credit stimulus.
- With most of Asia being a net oil importer, higher oil will impact external accounts.
- Significant uncertainty arises from reform- and financial-stability risk in China.

Source: PGIM Fixed Income and Credit Suisse EM Quarterly. For informational purposes only. Estimates are not guaranteed and are subject to change.

Buoyant Growth and Emerging Imbalances Point to the Need for Policy Tightening

Macro Economic Indicators – Quantitative

As of February 28, 2019

	GDP Growth 2018 Est.	Public Sector Debt/GDP 2018 Est.	Budget (Primary Balance) 2018 Est.	Current Account Balance 2018 Est.	Foreign Direct Investment 2018 Est.	Total Ext Debt/GDP 2018 Est.	Reserves 2018 Est. (Billion USD)
Czech Rep[1]	3.5%	30.5%	1.3%	0.1%	1.4%	76.9%	150
Hungary[1]	3.6%	70.3%	-0.2%	3.5%	-0.6%	79.6%	34
Poland	3.4%	53.8%	-0.9%	-1.2%	1.8%	66.7%	125
Romania[1]	4.4%	39.9%	-3.2%	-2.9%	2.1%	47.3%	48
Russia	1.5%	14.7%	0.1%	2.0%	1.3%	16.7%	418.6
South Africa	1.8%	53.8%	-0.8%	-2.7%	0.4%	26.3%	42.6
Turkey	4.5%	27.5%	-0.6%	-4.8%	1.3%	67.8%	90

- Strong growth in Central Europe continues. Stronger oil prices and a strong policy response help Russia bear the negative impact of sanctions. Turkey is embarking on a domestic-led growth strategy that will likely bring about a widening of the current account deficit while South Africa is facing major challenges.
- CEE central banks coping with low inflation or outright deflation, even more so after the collapse of oil prices.
- The South African central bank keeps its orthodox stance while the long-standing challenges are becoming more and more pressing and are not addressed.
- The recession is over in Russia but growth acceleration is constrained by structural rigidities. The macroeconomic stance remains prudent.

Source of above table: PGIM Fixed Income and Credit Suisse EM Quarterly. Estimates are not guaranteed and are subject to change. [1]Czech Republic, Hungary, and Romania: Total external debt does not include (estimated) intra-firm financial transactions. For informational purposes only. Does not constitute a recommendation regarding the merits of any investments. Does not constitute investment advice and should not be used as the basis for any investment decision. Past performance is not a guarantee or a reliable indicator of future results. Please see Notice for important disclosures regarding the information contained herein.

Adjusting to Commodity Price Moves

Macro Economic Indicators – Quantitative

As of February 28, 2019

	GDP Growth 2018 Est.	Public Sector Debt/GDP 2018 Est.	Budget (Primary Balance) 2018 Est.	Current Account Balance 2018 Est.	Foreign Direct Investment 2018 Est.	Total Ext Debt/GDP 2018 Est.	Reserves 2018 Est. (Billion USD)
Egypt	4.3%	97.7%	0.2%	-4.9%	6.0%	27.9%	28
Ghana	8.2%	68.3%	-3.0%	-2.3%	8.4%	40.8%	7
Kenya	4.9%	59.2%	-5.5%	-4.8%	-2.7%	27.5%	8
Nigeria	2.2%	19.4%	-4.0%	1.0%	0.6%	4.3%	42
Zambia	4.8%	51.0%	-3.4%	-0.6%	6.0%	38.0%	2

- The region is recovering from the negative terms of trade shock but diversification away from commodity exports will take some time.
- Macroeconomic adjustment is uneven across countries but it is reassuring that most of them are finally not shy to rely on IMF programmes.
- Overall, debt is rising in many countries putting macroeconomic adjustment even more to the fore for policymakers.

Source of above table: PGIM Fixed Income and IMF. Estimates are not guaranteed and are subject to change. For informational purposes only. Does not constitute a recommendation regarding the merits of any investments. Does not constitute investment advice and should not be used as the basis for any investment decision. Past performance is not a guarantee or a reliable indicator of future results. Please see Notice for important disclosures regarding the information contained herein.

Current Market Environment—Putting It Into Perspective

- Since 2003, there have been 12 Local Emerging Markets sell-offs of 4% or more.
- In most cases, the market has recovered all losses within a matter of months.

EM Local Market Selloff and Recoveries

As of February 28, 2019

Sell-off Period				Bounce Back from Trough	
Start Date	End Date	Peak to Trough Index Return	Recovery Time	Subsequent 6 Month Return	Subsequent 12 Month Return
May 9, 2013	Recovery ongoing	-20.9%[1]	--	--	--
May 3, 2012	June 1, 2012	-7.8%	2 months	13.3%	12.0%
August 31, 2011	October 4, 2011	-11.4%	6 months	10.2%	15.0%
November 4, 2010	November 29, 2010	-6.4%	5 months	9.1%	0.3%
April 26, 2010	May 25, 2010	-7.7%	3 months	15.2%	21.3%
January 6, 2009	March 9, 2009	-14.0%	4 months	34.4%	44.9%
August 4, 2008	October 27, 2008	-27.7%	11 months	19.6%	43.8%
July 23, 2007	August 16, 2007	-7.6%	2 months	15.7%	19.8%
May 10, 2006	June 23, 2006	-10.5%	6 months	18.2%	28.1%
March 8, 2005	March 28, 2005	-6.1%	5 months	6.4%	12.2%
April 1, 2004	May 13, 2004	-7.1%	3 1/2 months	16.5%	27.3%
June 16, 2003	August 25, 2003	-4.3%	3 1/2 months	10.2%	11.9%

Source: JP Morgan GBI-EM Global Diversified Index. J.P. Morgan index information has been obtained from sources believed to be reliable but J.P. Morgan does not warrant its completeness or accuracy. The Index is used with permission. The Index may not be copied, used, or distributed without J.P. Morgan's prior written approval. Copyright 2018, J.P. Morgan Chase & Co. All rights reserved. Past performance is not a guarantee or a reliable indicator of future results. Shown for illustrative purposes only. [1] Return during period of rebound from May 2013 through March 31, 2015, but not recovered to pre-taper level in May 2013.

Notice Page

PGIM Fixed Income operates primarily through PGIM, Inc., a registered investment adviser under the U.S. Investment Advisers Act of 1940, as amended, and a Prudential Financial, Inc. ("PFI") company. PGIM Fixed Income is headquartered in Newark, New Jersey and also includes the following businesses globally: (i) the public fixed income unit within PGIM Limited, located in London; (ii) PGIM Japan Co., Ltd. ("PGIM Japan"), located in Tokyo; and (iii) the public fixed income unit within PGIM (Singapore) Pte. Ltd., located in Singapore ("PGIM Singapore"). PFI of the United States is not affiliated with Prudential plc, which is headquartered in the United Kingdom. Prudential, PGIM, their respective logos and the Rock symbol are service marks of PFI and its related entities, registered in many jurisdictions worldwide.

In the United Kingdom and various European Economic Area ("EEA") jurisdictions, information is issued by PGIM Limited with registered office: Grand Buildings, 1-3 Strand, Trafalgar Square, London, WC2N 5HR. PGIM Limited is authorised and regulated by the Financial Conduct Authority of the United Kingdom (Firm Reference Number 193418) and duly passported in various jurisdictions in the EEA. These materials are issued by PGIM Limited to persons who are professional clients as defined in Directive 2014/65/EU (MiFID II). In certain countries in Asia, information is presented by PGIM Singapore, a Singapore investment manager registered with and licensed by the Monetary Authority of Singapore. In Japan, information is presented by PGIM Japan, registered investment adviser with the Japanese Financial Services Agency. In South Korea, information is presented by PGIM, Inc., which is licensed to provide discretionary investment management services directly to South Korean investors. In Hong Kong, information is presented by representatives of PGIM (Hong Kong) Limited, a regulated entity with the Securities and Futures Commission in Hong Kong to professional investors as defined in Part 1 of Schedule 1 of the Securities and Futures Ordinance. It is anticipated that certain investment management services would be delegated to PGIM, Inc. the above-listed entities' U.S. registered investment advisory affiliate. In Australia, this information is presented by PGIM (Australia) Pty Ltd ("PGIM Australia") for the general information of its "wholesale" customers (as defined in the Corporations Act 2001). PGIM Australia is a representative of PGIM Limited, which is exempt from the requirement to hold an Australian Financial Services License under the Australian Corporations Act 2001 in respect of financial services. PGIM Limited is exempt by virtue of its regulation by the Financial Conduct Authority (Reg: 193418) under the laws of the United Kingdom and the application of ASIC Class Order 03/1099. The laws of the United Kingdom differ from Australian laws. In South Africa, PGIM, Inc. is an authorised financial services provider – FSP number 49012.

All investments involve risk, including the possible loss of capital.

These materials are for informational or educational purposes only. The information is not intended as investment advice and is not a recommendation about managing or investing assets. In providing these materials, PGIM is not acting as your fiduciary.

The information herein is provided for informational purposes and is not meant to be legal or tax advice for any particular investor, which can only be provided by qualified tax and legal counsel. This document may contain confidential information and the recipient hereof agrees to maintain the confidentiality of such information. Distribution of this information to any person other than the person to whom it was originally delivered and to such person's advisers is unauthorized, and any reproduction of this document, in whole or in part, or the divulgence of any of its contents, without PGIM Fixed Income's prior written consent, is prohibited. Notwithstanding anything to the contrary herein, the recipient may disclose to any and all persons, without information of any kind, the tax treatment and tax structure of the account and all materials of any kind (including opinions or other tax analyses) that are provided to the recipient relating to such tax treatment and tax structure. No liability whatsoever is accepted for any loss (whether direct, indirect, or consequential) that may arise from any use by the recipient or any third party of the information contained in or derived from this document.

This document contains the current opinions of the manager and such opinions are subject to change. Certain information in this document has been obtained from sources that PGIM Fixed Income believes to be reliable as of the date presented; however, PGIM Fixed Income cannot guarantee the accuracy of such information, assure its completeness, or warrant such information will not be changed.

Unless otherwise indicated, the information, including, without limitation, holdings, rating data and opinions, contained herein is current as of the date of issuance (or such earlier date as referenced herein) and is subject to change without notice. Ratings are based upon current information which may be changed, suspended or withdrawn by the rating agencies due to changes in, or unavailability of, financial information. Management's discussion herein represent the views, opinions and recommendations of the applicable investment management team regarding the economic conditions, asset classes, securities, issuers or financial instruments referenced herein. PGIM Fixed Income has no obligation to update any or all such information; nor do we make any express or implied warranties or representations as to its completeness or accuracy. Any information presented regarding the affiliates of PGIM Fixed Income is presented purely to facilitate an organizational overview and is not a solicitation on behalf of any affiliate. PGIM Fixed Income and its affiliates may make investment decisions, including for their proprietary accounts, and/or provide oral and written commentary that are inconsistent with the recommendations or views expressed herein.

Notice Page

These materials are not intended as an offer or solicitation with respect to the purchase or sale of any security or other financial instrument or any investment management services. These materials do not constitute investment advice and should not be used as the basis for any investment decision.

An investment in your account or any other strategy mentioned herein involves certain risks. Due to, among other things, the nature of the markets and the investment strategies applicable to the account, an investment may only be suitable for certain investors. With the exception of the portfolio review section of this document which provides details of your account, the information regarding any other strategy does not take into account individual client circumstances, objectives or needs, and no determination has been made regarding the suitability of any securities, financial instruments or strategies for particular clients or prospects with regard to such information.

Any discussion of risk management is intended to describe PGIM Fixed Income's efforts to monitor and manage risk but does not imply low risk. No risk management technique can guarantee the mitigation or elimination of risk in any market environment. No assurance can be made that profits will be achieved or that substantial losses will not be incurred. These materials are not intended for distribution to or use by any person in any jurisdiction where such distribution would be contrary to local law or regulation.

Any references to specific securities and their issuers in any strategy other than your account are for illustrative purposes only and are not intended and should not be interpreted as recommendations to purchase or sell such securities. Any securities referenced may or may not be held in portfolios managed by PGIM Fixed Income and, if such securities are held, no representation is being made that such securities will continue to be held. Attributions are calculated on a gross basis and do not take into account fees or expenses. Totals may differ from the sum of components due to rounding. Past performance is not a guarantee or a reliable indicator of future results. The information contained herein has not been audited.

Any financial indices referenced herein as benchmarks are provided for informational purposes only. The use of benchmarks has limitations because portfolio holdings and characteristics will differ from those of the benchmark(s), and such differences may be material. You cannot make a direct investment in an index. Factors affecting portfolio performance that do not affect benchmark performance may include portfolio rebalancing, the timing of cash flows, credit quality, diversification and differences in volatility. In addition, financial indices do not reflect the impact of fees, applicable taxes or trading costs which reduce returns. Unless otherwise noted, financial indices assume reinvestment of dividends.

Any projections or forecasts presented herein are as of the date of this presentation and are subject to change without notice. Actual data will vary and may not be reflected here. Projections and forecasts are subject to high levels of uncertainty. Accordingly, any projections or forecasts should be viewed as merely representative of a broad range of possible outcomes. Projections or forecasts are estimated, based on assumptions, and are subject to significant revision and may change materially as economic and market conditions change. PGIM Fixed Income has no obligation to provide updates or changes to any projections or forecasts.

All performance targets contained herein are subject to revision and are provided solely as a guide to current expectations. There can be no assurance that any product or strategy described herein will achieve any targets or that there will be any return of capital. Past performance is not a guarantee or a reliable indicator of future results and an investment could lose value.

Notes To Performance

Gross returns do not reflect the deduction of investment advisory fees or other expenses it may incur in the management of its investment advisory account, but are after transaction costs. A client's return will be reduced by such advisory fees and other management expenses. For example, a 1.00% management fee deducted quarterly would result in the following cumulative compounded reduction in portfolio time-weighted rate of return: 1 year = 1.004%, 3 year = 3.042%, 5 year = 5.121% and 10 year = 10.5%. The investment advisory fees are described in Part 2A of the Adviser's Form ADV which is publicly available on the SEC's website at www.sec.gov, and available upon request. Fees represent the highest standard advisory fees currently in effect and may have been higher or lower historically. Fees may be higher for commingled accounts, insurance company separate accounts, and trust, corporate, or bank-owned life insurance products. Performance has been calculated in US dollars, unless otherwise noted in composite descriptions, and reflects the deduction of transaction costs and withholding taxes, if any, and the reinvestment of income.

Core Conservative Composite Net Disclosure (Inception Date: January 1, 1989) —An investment management fee of 0.12% would have reduced the since inception annualized return ending December 31, 2018 from 6.36% to 6.24%.

Core Composite Net Disclosure (Inception Date: January 1, 1991)—An investment management fee of 0.28% would have reduced the since inception annualized return ending December 31, 2018 from 6.29% to 5.96%.

Japan Total Core Bond Net Disclosure (Inception Date: January 1, 2003)—An investment management fee of 0.25% would have reduced the since inception annualized return ending December 31, 2018 from 2.02% to 1.67%.

Global Core Composite Net Disclosure (Inception Date: September 1, 2008)—An investment management fee of 0.30% would have reduced the since inception annualized return ending December 31, 2018 from 4.37% to 4.01%.

Core Plus Composite Net Disclosure (Inception Date: January 1, 1996)—An investment management fee of 0.30% would have reduced the since inception annualized return ending December 31, 2018 from 6.11% to 5.76%.

Global Aggregate Plus Composite Net Disclosure (Inception Date: November 1, 2002)—An investment management fee of 0.35% would have reduced the since inception annualized return ending December 31, 2018 from 6.60% to 6.13%.

Absolute Return Composite Net Disclosure (Inception Date: May 1, 2011)—An investment management fee of 0.40% would have reduced the since inception annualized return ending December 31, 2018 from 3.56% to 3.10%.

Multi-Asset Credit Composite Net Disclosure (Inception Date: November 1, 2016)—An investment management fee of 0.40% would have reduced the since inception annualized return ending December 31, 2018 from 4.25% to 3.84%.

Strategic Bond Composite Net Disclosure (Inception Date: September 1, 2015)—An investment management fee of 0.45% would have reduced the since inception annualized return ending December 31, 2018 from 6.68% to 6.20%. Effective March 1, 2019, the Unconstrained Bond Composite was renamed the Strategic Bond Composite. The strategy benchmark also changed from 3-month Libor to the Bloomberg Barclays Intermediate U.S. Aggregate Bond Index.

Global Dynamic Bond Composite Net Disclosure (Inception Date: January 1, 2016)—An investment management fee of 0.50% would have reduced the since inception annualized return ending December 31, 2018 from 7.16% to 6.62%.

Short Duration Core Plus Composite Net Disclosure (Inception Date: February 1, 2014)—An investment management fee of 0.30% would have reduced the since inception annualized return ending December 31, 2018 from 2.71% to 2.41%.

Short Term Corporate Composite Net Disclosure (Inception Date: January 1, 1994)—An investment management fee of 0.30% would have reduced the since inception annualized return ending December 31, 2018 from 5.08% to 4.78%.

Long Duration (Government/Credit) Composite Net Disclosure (Inception Date: December 1, 2009)—An investment management fee of 0.28% would have reduced the since inception return ending December 31, 2018 from 6.64% to 6.34%.

Corporate Fixed Income (Long Duration) Composite Net Disclosure (Inception Date: July 1, 2008)—An investment management fee of 0.30% would have reduced the since inception annualized return ending December 31, 2018 from 8.14% to 7.82%.

Long Duration Custom LDI Composite Net Disclosure (Inception Date: July 1, 1998)—An investment management fee of 0.30% would have reduced the since inception return ending December 31, 2018 from 6.86% to 6.55%.

Structured Product (Unconstrained) Composite Net Disclosure (Inception Date: January 1, 2016)—An investment management fee of 0.40% would have reduced the since inception return ending December 31, 2018 from 5.86% to 5.44%.

Corporate Fixed Income Composite Net Disclosure (Inception Date: July 1, 1991)—An investment management fee of 0.30% would have reduced the since inception annualized return ending December 31, 2018 from 7.24% to 6.90%.

European Corporate (USD Hedged) Composite Net Disclosure (Inception Date: February 1, 2008)—An investment management fee of 0.30% would have reduced the since inception annualized return ending December 31, 2018 from 5.57% to 5.26%.

Global Corporate (Unhedged) Composite Net Disclosure (Inception Date: May 1, 2010)—An investment management fee of 0.30% would have reduced the since inception annualized return ending December 31, 2018 from 4.10% to 3.79%.

Notes To Performance

Gross returns do not reflect the deduction of investment advisory fees or other expenses it may incur in the management of its investment advisory account, but are after transaction costs. A client's return will be reduced by such advisory fees and other management expenses. For example, a 1.00% management fee deducted quarterly would result in the following cumulative compounded reduction in portfolio time-weighted rate of return: 1 year = 1.004%, 3 year = 3.042%, 5 year = 5.121% and 10 year = 10.5%. The investment advisory fees are described in Part 2A of the Adviser's Form ADV which is publicly available on the SEC's website at www.sec.gov, and available upon request. Fees represent the highest standard advisory fees currently in effect and may have been higher or lower historically. Fees may be higher for commingled accounts, insurance company separate accounts, and trust, corporate, or bank-owned life insurance products. Performance has been calculated in US dollars, unless otherwise noted in composite descriptions, and reflects the deduction of transaction costs and withholding taxes, if any, and the reinvestment of income.

Higher Quality High Yield Composite Net Disclosure (Inception Date: July 1, 1998)—An investment management fee of 0.50% would have reduced the since inception annualized return ending December 31, 2018 from 7.43% to 6.90%.

Broad Market High Yield Composite Net Disclosure (Inception Date: March 1, 2002)—An investment management fee of 0.50% would have reduced the since inception annualized return ending December 31, 2018 from 8.14% to 7.58%.

U.S. Senior Secured Loans (Unconstrained) Composite Net Disclosure (Inception Date: May 1, 2007)—An investment management fee of 0.55% would have reduced the since inception annualized return ending December 31, 2018 from 4.67% to 4.10%.

European High Yield Composite Net Disclosure (Inception Date: November 1, 2010)—An investment management fee of 0.50% would have reduced the since inception annualized return ending December 31, 2018 from 7.64 to 7.10%. Performance shown in EUR.

European Senior Secured Debt (Constrained) Composite Net Disclosure (Inception Date: July 1, 2006)—An investment management fee of 0.55% would have reduced the since inception annualized return ending December 31, 2018 from 4.90% to 4.32%. Performance shown in EUR.

Global High Yield (Euro Hedged) Composite Net Disclosure (Inception Date: May 1, 2002)—An investment management fee of 0.55% would have reduced the since inception annualized return ending December 31, 2018 from 7.75% to 7.19%. Performance shown in EUR.

Global Senior Secured Loans Composite Net Disclosure (Inception Date: December 1, 2011)—An investment management fee of 0.60% would have reduced the since inception annualized return ending December 31, 2018 from 5.59% to 4.96%.

Emerging Markets Debt Composite Net Disclosure (Inception Date: July 1, 1996)—An investment management fee of 0.55% would have reduced the since inception annualized return ending December 31, 2018 from 11.44% to 10.72%.

Emerging Markets Blend Composite Net Disclosure (Inception Date: December 1, 2007)—An investment management fee of 0.55% would have reduced the since inception annualized return ending December 31, 2018 from 5.70% to 5.04%.

Emerging Markets Blend Plus Composite Net Disclosure (Inception Date: August 1, 2014)—An investment management fee of 0.75% plus the actual incentive and certain other applicable fees and expenses would have reduced the since inception return ending December 31, 2018 from 3.43% to 1.94%.

Emerging Markets Local Currency Composite Net Disclosure (Inception Date: January 1, 2011)—An investment management fee of 0.55% would have reduced the since inception annualized return ending December 31, 2018 from 0.30% to -0.28%.

Emerging Markets Corporate Debt Composite Net Disclosure (Inception Date: March 1, 2013)—An investment management fee of 0.55% would have reduced the since inception annualized return ending December 31, 2018 from 3.73% to 3.17%.

National Municipal Bond Composite Net Disclosure (Inception Date: January 1, 1994)—An investment management fee of 0.28% would have reduced the since inception annualized return ending December 31, 2018 from 5.12% to 4.83%.

High Income Municipal Bond Composite Net Disclosure (Inception Date: January 1, 1994)—An investment management fee of 0.32% would have reduced the since inception annualized return ending December 31, 2018 from 5.74% to 5.41%.

U.S. Liquidity Relative Value Composite Net Disclosure (Inception Date: July 1, 2002)—An investment management fee of 0.75% plus the actual incentive and certain other applicable fees and expenses would have reduced the since inception return ending December 31, 2018 from 7.41% to 4.74%.

Global Liquidity Relative Value Composite Net Disclosure (Inception Date: July 1, 2014)—An investment management fee of 0.75% plus the actual incentive and certain other applicable fees and expenses would have reduced the since inception return ending December 31, 2018 from 8.60% to 6.28%.

Emerging Markets Debt Long/Short Composite Net Disclosure (Inception Date: November 1, 2007)—An investment management fee of 0.75% plus the actual incentive and certain other applicable fees and expenses would have reduced the since inception return ending December 31, 2018 from 9.21% to 5.98%.

U.S. Liquidity Relative Value (S&P 500 Overlay) Composite Net Disclosure (Inception Date: April 1, 2014)—An investment management fee of 0.75% plus the actual incentive and certain other applicable fees and expenses would have reduced the since inception return ending December 31, 2018 from 11.39% to 9.82%.

Benchmark Descriptions

Bloomberg Barclays US Aggregate Bond Index (Bloomberg Barclays US Aggregate Index)
(Core Fixed Income, Core Plus, Core Conservative)
The Bloomberg Barclays US Aggregate Index covers the USD-denominated, investment-grade, fixed-rate or step up, taxable bond market of SEC-registered securities and includes bonds from the Treasury, Government-Related, Corporate, MBS (agency fixed-rate and hybrid ARM passthroughs), ABS, and CMBS sectors. Securities included in the index must have at least 1 year until final maturity and be rated investment-grade (Baa3/ BBB-/BBB-) or better using the middle rating of Moody's, S&P, and Fitch.

Bloomberg Barclays Global Aggregate Bond Index USD Unhedged (Bloomberg Barclays Global Aggregate Index)
(Global Core, Global Aggregate Plus)
The Bloomberg Barclays Global Aggregate Index provides a broad-based measure of the global investment-grade fixed income markets. The three major components of this index are the U.S. Aggregate, the Pan-European Aggregate, and the Asian-Pacific Aggregate Indices. The index also includes Eurodollar and Euro-Yen corporate bonds, Canadian government, agency and corporate securities, and USD investment-grade 144A securities. Securities included in the index must have at least 1 year until final maturity and be rated investment-grade (Baa3/ BBB-/BBB) or better using the middle rating of Moody's, S&P, and Fitch.

FTSE World Government Bond Index
(Former benchmark for Global Aggregate Plus)
FTSE World Government Bond Index is a market-capitalization-weighted benchmark that tracks the performance of the government bond markets. The composition of the index consists of sovereign debt denominated in the domestic currency. Securities must be rated BBB-/Baa3 by S& P or Moody's.

ICE BofAML US Dollar 3-Month LIBOR Constant Maturity Index (ML 3-Month LIBOR Index)
(Absolute Return)
The ICE BofAML US Dollar 3-Month LIBOR Constant Maturity Index tracks the performance of a synthetic asset paying LIBOR to a stated maturity. The index is based on the assumed purchase at par of a synthetic instrument having exactly its stated maturity and with a coupon equal to that day's fixing rate. That issue is assumed to be sold the following business day (priced at a yield equal to the current day fixing rate) and rolled into a new instrument. Source: ICE Data Indices, LLC, used with permission. ICE Data Indices, LLC is licensing the ICE Data Indices and related data "as is," makes no warranties regarding same, does not guarantee the suitability, quality, accuracy, timeliness, and/or completeness of the ICE Data Indices or any data included in, related to, or derived therefrom, assumes no liability in connection with their use, and does not sponsor, endorse, or recommend PGIM Fixed Income, or any of its products or services

Bloomberg Barclays U.S. 1-3 Year Government/Credit Bond Index (Bloomberg Barclays U.S. 1-3 Year Government/Credit Index)
(Short Duration Core Plus)
Bloomberg Barclays U.S. 1-3 Year Government/Credit Bond Index covers USD-denominated and nonconvertible, publicly issued US Government or investment-grade securities that are fixed-rate or step ups. Bonds must have a maturity from 1 up to (but not including) 3 years and be rated investment-grade (Baa3/ BBB-/BBB-) or better using the middle rating of Moody's, S&P, and Fitch.

Bloomberg Barclays U.S. 1-5 Year Credit Bond Index (Bloomberg Barclays U.S. 1-5 Year Credit Index)
(Short Term Corporate)
Bloomberg Barclays US 1-5 Year Credit Bond Index is a subset of the Bloomberg Barclays Credit Index with maturities of 1-5 years. The U.S. Credit Index is comprised of the U.S. Corporate Index and the non-native currency subcomponent of the U.S. Government-Related Index. The U.S. Credit Index includes publicly issued U.S. corporates, specified foreign debentures and secured notes denominated in USD. Securities must be rated investment-grade (Baa3/BBB-/BBB- or above) using the middle rating of Moody's, S&P, and Fitch, respectively.

Bloomberg Barclays US Long Duration Government/Credit Index (Bloomberg Barclays US Long Govt/Credit Index)
(*Long Duration Government/Credit, Long Duration Asset Liability Composite)*
The Bloomberg Barclays US Government/Credit Index covers USD-denominated and non-convertible, publicly issued US Government or investment-grade securities that are fixed rate or step ups. Securities must have a maturity of 10 years or greater and be rated investment-grade (Baa3/ BBB-/BBB-) or better using the middle rating of Moody's, S&P, and Fitch.

Bloomberg Barclays Intermediate U.S. Aggregate Bond Index (Bloomberg Barclays Intermediate U.S. Aggregate Bond Index)
(*Strategic Bond Composite)*
The Bloomberg Barclays Intermediate U.S. Aggregate Bond Index covers the USD-denominated, investment-grade, fixed-rate or step up, taxable bond market of SEC-registered securities with maturities of 1-10 years. The index includes bonds from the Treasury, Government-Related, Corporate, MBS (agency fixed-rate and hybrid ARM passthroughs), ABS and CMBS sectors. Securities must be rated investment-grade (Baa3/BBB-/BBB- or above) using the middle rating of Moody's, S&: and Fitch and have at least 1 year until final maturity.

Benchmark Descriptions (cont'd)

Bloomberg Barclays US Long Corporate Bond Index (Bloomberg Barclays US Long Corporate Index)
(Long Duration Corporate)
The Bloomberg Barclays US Long Corporate Bond Index covers USD-denominated and non-convertible, publicly issued securities that are fixed-rate or step ups. Securities must have a maturity of 10 years and be rated investment-grade (Baa3/ BBB-/BBB-) or better using the middle rating of Moody's, S&P, and Fitch.

Client-Directed Liability Based Benchmark
(Long Duration LDI)
The customized benchmark for the Long Duration Custom Composite is the weighted average of each composite member's benchmark return rebalanced monthly. The benchmarks are market based indices/sub-indices constructed to reflect the liabilities of the portfolios. The benchmarks consists of various weights of the sub indices of the Bloomberg Barclays Intermediate (maturities from 1 up to but not including10 years), and Long (maturities of 10+ years) Government/Credit and US Corporate Indices. All securities must be rated investment-grade (Baa3/ BBB-/BBB-) or above using the middle rating of Moody's, S&P, and Fitch.

3 Month U.S. Dollar LIBOR Average
(Structured Product Unconstrained)
3 Month LIBOR (London Interbank Offered Rate) is the stated rate of interest at which banks in the London wholesale money markets may borrow funds from one another for three months. The 90-day average of the daily rates set by the Intercontinental Exchange Benchmark Administration Ltd ("IBA") is used to derive the return for the month.

Bloomberg Barclays US Credit Bond Index (Bloomberg Barclays US Credit Index)
(Investment Grade Corporates)
The Bloomberg Barclays US Credit Index is comprised of the U.S. Corporate Index and the non-native currency subcomponent of the U.S. Government-Related Index. The U.S. Credit Index includes publicly issued U.S. corporate, specified foreign debentures and secured notes denominated in USD. Securities included in the index must have at least 1 year until final maturity and be rated investment-grade (Baa3/ BBB-/BBB-) or better using the middle rating of Moody's, S&P, and Fitch.

iBoxx Euro Corporate Index 100% USD Hedged (iBoxx Euro Corporate Index (USD Hedged))
(European Corporate Fixed Income (USD Hedged))
The iBoxx EUR benchmark is made up of only fixed-rate bonds or step ups whose cash flow can be determined in advance. The indices are comprised solely of bonds. Treasury Bills and other money market instruments are not eligible. The iBoxx EUR indices include only Euro and legacy currency denominated bonds. Securities must be rated investment-grade (Baa3/ BBB-/BBB-) or above by at least one of the following rating agencies: Standard & Poor's, Moody's or Fitch and have at least 1 year until final maturity at the rebalancing date.

Bloomberg Barclays Global Aggregate Corporate Bond Index (USD Hedged) (Bloomberg Barclays Global Corporate Index (USD Hedged))
(Global Corporate (USD Hedged)
The Bloomberg Barclays Global Aggregate Corporate Bond Index (USD Hedged) is a component of the Global Aggregate Index that includes the global investment-grade, fixed-rate or step up, taxable securities sold by industrial, utility and financial issuers. The three major components of this index are the U.S. Aggregate Corporate, the Pan-European Aggregate Corporate, and the Asian-Pacific Aggregate Corporate indices. The index also includes Eurodollar and Euro-Yen corporate bonds, Canadian corporate securities, and USD investment-grade 144A securities. Securities included in the index must have at least 1 year until final maturity and be rated investment-grade (Baa3/ BBB-/BBB-) or better using the middle rating of Moody's, S&P, and Fitch. The index is hedged to USD.

Bloomberg Barclays Global Aggregate Corporate Index Unhedged (Bloomberg Barclays Global Corporate Index (Unhedged))
(Global Corporate (Unhedged)
The Bloomberg Barclays Global Corporate Aggregate Index is a component of the Global Aggregate Index that includes the global investment-grade, fixed-rate or step up, taxable securities sold by industrial, utility and financial issuers. The three major components of this index are the U.S. Aggregate Corporate, the Pan-European Aggregate Corporate, and the Asian-Pacific Aggregate Corporate indices. The index also includes Eurodollar and Euro-Yen corporate bonds, Canadian corporate securities, and USD investment-grade 144A securities. Securities included in the index must have at least 1 year until final maturity and be rated investment-grade (Baa3/ BBB-/BBB-) or better using the middle rating of Moody's, S&P, and Fitch.

Benchmark Descriptions (cont'd)

Bloomberg Barclays U.S. Corporate High Yield Ba/B 1% Issuer Capped Bond Index (Bloomberg Barclays US High Yield Ba/B 1% Issuer Capped Index)
(Higher Quality High Yield)
The Bloomberg Barclays U.S. High Yield Ba/B 1% Issuer Capped Index is an issuer-constrained version of the Bloomberg Barclays U.S. High Yield Index that covers the USD-denominated, non-investment-grade, fixed-rate, taxable corporate bond market. The Bloomberg Barclays U.S. High Yield 1% Ba/B Issuer Capped Index limits issuer exposures to a maximum 1% and redistributes the excess market value index-wide on a pro-rata basis. Securities must be rated below investment-grade (Ba1/BB+/BB+ or below) using the middle rating of Moody's, S&P, and Fitch, and have at least a one year until final maturity

Bloomberg Barclays U.S. Corporate High Yield Bond Index (Bloomberg Barclays U.S. High Yield Index)
(Broad Market High Yield)
Bloomberg Barclays U.S. Corporate High Yield Bond Index covers the USD-denominated, non-investment grade, fixed-rate or step ups, taxable corporate bond market. The index excludes Emerging Markets debt. Securities must be rated below investment-grade (Ba1/BB+/BB+ or below) using the middle rating of Moody's, S&P, and Fitch, respectively and have at least 1 year until final maturity.

Credit Suisse Leveraged Loan Index (CS Leveraged Loan Index)
(US Senior Secured Loans)
The Credit Suisse Leveraged Loan Index is a representative, unmanaged index of tradable, US dollar denominated floating rate senior secured loans and is designed to mirror the investable universe of the US dollar denominated leveraged loan market. The Index return does not reflect the impact of principal repayments in the current month.

ICE BofAML European Currency High Yield ex Finance 2% Constrained Index (ML Euro HY ex Finance 2% Constrained Index)
(European High Yield (Euro Hedged))
The ICE BofAML European High Yield ex Finance 2% Constrained Index tracks the performance of EUR and GBP denominated below investment grade corporate debt publicly issued in the eurobond, sterling domestic or euro domestic markets. Qualifying securities must have a below investment grade rating and an investment grade country of risk. The index contains all non-Financial securities but caps issuer exposure at 2%. Source: ICE Data Indices, LLC, used with permission. ICE Data Indices, LLC is licensing the ICE Data Indices and related data "as is," makes no warranties regarding same, does not guarantee the suitability, quality, accuracy, timeliness, and/or completeness of the ICE Data Indices or any data included in, related to, or derived therefrom, assumes no liability in connection with their use, and does not sponsor, endorse, or recommend PGIM Fixed Income, or any of its products or services.

Credit Suisse Western European Leveraged Loan Index (EUR Hedged) (CS Western European Leveraged Loan Index (EUR Hedged))
(European Senior Secured Debt)
Credit Suisse Western European Leveraged Loan Index: All Denominations Euro Hedged. The Index is a representative, unmanaged index of tradable, floating rate senior secured loans designed to mirror the investable universe of the European leveraged loan market. The index is hedged to EUR. The Index return does not reflect the impact of principal repayments in the current month.

Bloomberg Barclays Global High Yield Index (Euro Hedged)
(Global High Yield (Euro Hedged))
The Bloomberg Barclays Global High Yield Index provides a broad-based measure of the global high yield fixed income markets. It includes U.S. high yield, Pan-European high yield, U.S. emerging markets high yield, and Pan-European emerging markets high yield indices. Securities included in the index must be fully taxable, have at least on year until final maturity, and be rated high yield (Ba//BB+/BB+ or below) using the middle rating of Moody's S&P and Fitch.

CS Blend Lev. Loan & West European Lev. Loan: Euro Denominated (USD Hedged)
(Global Senior Secured Loans)
The custom benchmark for this composite is comprised of the Credit Suisse Leveraged Loan Index and the Credit Suisse Western European Leveraged Loan Index Euro Denominated (hedged to USD) and is rebalanced monthly. As of December 31, 2017, the weights are 86% and 14%, respectively. The Credit Suisse indices are representative unmanaged indices of tradeable, floating rate senior secured loans designed to mirror the investable universe of the US and European Leveraged Loan markets.

JP Morgan Emerging Markets Bond Index Global Diversified (JPM EMBI Global Diversified Index)
(Emerging Markets Debt)
The Emerging Markets Bond Index Global Diversified (EMBI Global) tracks total returns for USD-denominated debt instruments issued by emerging market sovereign and quasi-sovereign entities: Brady bonds, loans, and Eurobonds. It limits the weights of those index countries with larger debt stocks by only including specified portions of these countries' eligible current face amounts of debt outstanding. To be deemed an emerging market by the EMBI Global Diversified Index, a country must be rated Baa1/BBB+ or below by Moody's/S&P rating agencies. Information has been obtained from sources believed to be reliable but J.P. Morgan does not warrant its completeness or accuracy. The Index is used with permission. The Index may not be copied, used, or distributed without J.P. Morgan's prior written approval.

Benchmark Descriptions (cont'd)

Blend of JPM EMBI Global Diversified & GBI-EM Global Diversified

(Emerging Markets Blend, Emerging Markets Blend Plus)

The customized benchmark for this composite is an even blend of the JPMorgan Government Bond Index-Emerging Markets Global Diversified Index and the JPMorgan Emerging Markets Bond Index Global Diversified Index. The Government Bond Index-Emerging Markets Global Diversified Index (GBI-EM Global) tracks total returns for local currency bonds issued by emerging market governments while the Emerging Markets Bond Index Global Diversified (EMBI Global) tracks total returns for USD-denominated debt instruments issued by emerging market sovereign and quasi-sovereign entities: Brady bonds, loans, and Eurobonds. It limits the weights of those index countries with larger debt stocks by only including specified portions of these countries' eligible current face amounts of debt outstanding. Information has been obtained from sources believed to be reliable but J.P. Morgan does not warrant its completeness or accuracy. The Index is used with permission. The Index may not be copied, used, or distributed without J.P. Morgan's prior written approval.

JPMorgan Government Bond Index-Emerging Markets Global Diversified Index (JPM GBI-EM Global Diversified Index)

(Emerging Markets Debt (Local Currency))

The Government Bond Index-Emerging Markets Global Diversified Index (GBI-EM Global) tracks total returns for local currency bonds issued by emerging market governments. Information has been obtained from sources believed to be reliable but J.P. Morgan does not warrant its completeness or accuracy. The Index is used with permission. The Index may not be copied, used, or distributed without J.P. Morgan's prior written approval.

JPMorgan Corporate Emerging Markets Bond Index Broad Diversified (JPM CEMBI Broad Diversified)

(Emerging Markets Corporate Debt)

The CEMBI tracks total returns of US dollar-denominated debt instruments issued by corporate entities in Emerging Markets countries. The CEMBI Broad is the most comprehensive corporate benchmark followed by the CEMBI, which consists of an investable universe of corporate bonds. Information has been obtained from sources believed to be reliable but J.P. Morgan does not warrant its completeness or accuracy. The Index is used with permission. The Index may not be copied, used, or distributed without J.P. Morgan's prior written approval.

Bloomberg Barclays Municipal Bond Index

(National Municipal Bond)

The index covers the USD-denominated long term tax exempt bond market. The index has four main sectors: state and local general obligation bonds, revenue bonds, insured bonds, and pre-refunded bonds. The bonds must be fixed-rate or step ups, have a dated date after Dec. 13, 1990, and must be at least 1 year from their maturity date. Non-credit enhanced bonds (municipal debt without a guarantee) must be rated investment grade (Baa3/BBB-/BBB- or better) by the middle rating of Moody's, S&P, and Fitch.

Blend: Bloomberg Barclays Muni High Income/Muni Index

(High Income Municipal Bond)

The customized benchmark for this composite is an even blend of the Bloomberg Barclays Municipal High Yield Bond Index and Bloomberg Barclays Municipal Bond Index. The Bloomberg Barclays Municipal Bond Index covers the USD-denominated long term tax exempt bond market. The index has four main sectors: state and local general obligation bonds, revenue bonds, insured bonds, and pre-refunded bonds. The bonds must be fixed-rate or step ups, have a dated date after Dec. 13, 1990, and must be at least 1 year from their maturity date. Non-credit enhanced bonds (municipal debt without a guarantee) must be rated investment-grade (Baa3/ BBB-/BBB- or better) by the middle rating of Moody's, S&P, and Fitch. The Bloomberg Barclays Municipal High Yield Bond Index is the high yield component of the Bloomberg Barclays Municipal Bond Index.

Nomura-BPI Overall

The Nomura-BPI Overall index tracks total returns of all fixed income securities in the Japanese bond market that meet certain criteria. The intellectual property rights and any other rights in Nomura-BPI Overall Index belong to Nomura Securities Co., Ltd. Nomura Securities Co., Ltd. does not guarantee accuracy, completeness, reliability, usefulness, marketability, merchantability and fitness of the Index, and does not account for performance of the fund with the use of the Index. This disclaimer is applicable to Nomura-BPI Overall Index referenced herein.

3 Month LIBOR

(Multi Asset Credit, Strategic Bond, Global Dynamic Bond, U.S. Liquidity Relative Value, Emerging Markets Long/Short)

3 Month LIBOR (London Interbank Offered Rate) rate is the stated rate of interest at which banks in the London wholesale money markets may borrow funds from one another for three months. The daily rate set by the Intercontinental Exchange Benchmark Administration Ltd ("IBA") set on the last day of each calendar month is used to derive the return for the upcoming month. Reset monthly for Emerging Markets Long/Short Composite and reset quarterly for US Government/Agency Long Short Composite. Effective March 1, 2019, the Unconstrained Bond Composite was renamed the Strategic Bond Composite. The strategy benchmark also changed from 3-month Libor to the Bloomberg Barclays Intermediate U.S. Aggregate Bond Index.

S&P 500 Total Return Index (S&P 500 Index)

(U.S. Liquidity Relative Value (S&P 500 Overlay)

S&P 500 Total Return Index is a commonly recognized, market capitalization weighted index of 500 widely held equity securities, designed to measure broad U.S. equity performance.

Emerging Markets Debt Composite

As of December 31, 2017

Year	Composite (Gross %)	Composite (Net %)	Benchmark (%)	Composite 3 Year St Dev (%)	Benchmark 3 Year St Dev (%)	# of Portfolios	Internal Dispersion	Composite Market Value $(000s)	Firm Assets Under Mgmt $(in billions)
2017	14.48	13.85	10.26	5.90	5.04	10	0.13	4,060,787	708.58
2016	12.77	12.15	10.15	6.82	5.78	8	NM	2,470,942	637.20
2015	2.16	1.60	1.18	7.46	6.51	10	0.54	3,965,915	574.77
2014	7.50	6.91	7.43	8.30	7.03	10	0.95	3,697,001	543.29
2013	-4.73	-5.25	-5.25	9.13	7.39	9	0.51	3,503,117	405.16
2012	23.69	22.83	17.44	8.24	6.27	8	0.54	3,091,779	394.75
2011	6.45	5.71	7.35	8.81	7.09	8	0.54	2,339,791	335.31
2010	15.17	14.37	12.24	15.36	13.03	7	0.46	1,675,266	269.74
2009	38.54	37.58	29.82	15.12	12.74	7	NM	1,702,299	231.88
2008	-17.70	-18.27	-12.03	14.44	11.99	6	4.61	789,293	198.16
2007	7.17	6.42	6.16	6.82	5.15	7	NM	1,473,904	201.78
2006	12.97	12.18	10.29	7.93	6.75	fewer than 5	NM	653,416	187.45
2005	17.78	16.96	11.86	8.62	7.95	fewer than 5	NM	195,701	170.28
2004	17.05	16.23	11.77	11.57	11.38	fewer than 5	NM	76,720	143.77
2003	37.01	36.05	28.82	12.06	12.26	fewer than 5	NM	61,455	150.79
2002	16.40	15.59	14.24	12.67	12.74	fewer than 5	NM	44,452	150.45
2001	8.13	7.38	-0.79	12.69	12.38	fewer than 5	NM	38,189	140.04
2000	16.62	15.80	15.66	21.14	21.57	fewer than 5	NM	35,317	129.31
1999	28.33	27.49	25.97	21.85	22.39	fewer than 5	NM	59,875	185.30
1998	-14.53	-15.04	-14.35			fewer than 5	NM	168,118	130.90
1997	14.60	13.92	13.02			fewer than 5	NM	54,612	119.50
1996-07 - 1996-12	23.05	22.68	20.64			fewer than 5	NM	12,943	105.60

	Period Ending 12/31/2017	Composite (Gross %)	Composite (Net %)	Benchmark (%)
	1 Year	14.48	13.85	10.26
	3 Year	9.67	9.06	7.11
	5 Year	6.20	5.61	4.58
	10 Year	8.85	8.17	7.29
Since	July 1, 1996	12.30	11.57	9.72

The inception date of the composite is July 1, 1996.

PGIM Fixed Income claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS standards. PGIM Fixed Income has been independently verified for the periods January 1, 1993 through December 31, 2017.

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. The Emerging Markets Debt composite has been examined for the periods July 1, 1996 through December 31, 2017. The verification and performance examination reports are available upon request.

Emerging Markets Debt Composite

As of December 31, 2017

Notes

1. PGIM Fixed Income (the "Firm") is a global asset manager primarily focused on public fixed income investments whose U.S. business operates as a unit of PGIM, Inc. PGIM, Inc. is an investment adviser registered with the United States Securities and Exchange Commission. The Firm is headquartered in Newark, New Jersey and also includes the following businesses: (i) the public fixed income unit within PGIM Limited, located in London; (ii) locally managed assets of PGIM Japan Co., Ltd ("PGIM Japan"), located in Tokyo; and (iii) the public fixed income unit within PGIM (Singapore) Pte. Ltd., located in Singapore. PGIM Japan has been included within the Firm as of June 30, 2014, resulting in an increase in assets under management (AUM) of approximately $105 billion. The Firm's list of composite descriptions is available upon request.

2. The Emerging Markets Debt Composite includes all discretionary portfolios whose investment objective is to achieve high risk-adjusted returns and outperform a diversified emerging markets debt index comprised of sovereign and quasi-sovereign issues. Portfolios in this composite will seek to achieve this objective by investing in the full range of sovereign, quasi-sovereign, and corporate emerging markets debt securities denominated in both hard and local currencies, and are managed against standard US$-denominated emerging markets benchmarks. As of April 1, 2016, the Emerging Markets Debt Composite was redefined to exclude portfolios that do not have the ability to take net short positions in emerging market currencies. This change was made to better reflect the strategy of the composite. Composite returns may include securities lending income. This composite was created on September 1, 2006.

3. Performance results are stated gross and net of model fees. Gross returns do not reflect the deduction of investment advisory fees or any other expenses that may be incurred in the management of the account. Model net returns are calculated monthly by geometrically linking 1/12th of the highest standard advisory fee in effect for the respective period to the gross composite return. The standard advisory fee schedule currently in effect is as follows: 0.55% on the first $100 million, 0.47% on the next $100 million and 0.40% thereafter. Actual client fees may vary depending on, among other things, the applicable fee schedule and portfolio size. Returns for each client will be reduced by such fees and expenses as described in their individual contract. The Firm's advisory fees (other than fees related to PGIM Japan) are disclosed in PGIM Fixed Income's SEC Form ADV Part 2A, which is available upon request. Fees related to PGIM Japan are also available upon request. Fees may be higher for commingled accounts, insurance company separate accounts, and trust, corporate, or bank-owned life insurance products. The composite shown may include accounts that are group annuity or life insurance products issued by The Prudential Insurance Company of America and/or its affiliated insurance subsidiaries. Performance has been calculated in US dollars and reflects the deduction of transaction costs and withholding taxes, if any, and the reinvestment of income. Policies for valuing portfolios, calculating performance, and preparing compliant presentations are available upon request. Past performance is not a guarantee or a reliable indicator of future results.

4. The internal dispersion of annual returns is measured by the standard deviation across the asset-weighted returns of portfolios represented in the composite for a full year. For periods where 5 or fewer accounts were included in the composite for the full year, internal dispersion is not disclosed, as it is not considered meaningful (NM). The three-year annualized standard deviation is calculated using monthly returns and measures the variability of the gross composite and benchmark returns over the preceding 36-month period.

5. As of March 1, 2006 the benchmark for this composite is the JP Morgan EMBI Global Diversified. The Emerging Markets Bond Index Global Diversified (EMBI Global) tracks total returns for USD-denominated debt instruments issued by emerging market sovereign and quasi-sovereign entities: Brady bonds, loans, and Eurobonds. It limits the weights of those index countries with larger debt stocks by only including specified portions of these countries' eligible current face amounts of debt outstanding. Source of the benchmark: JP Morgan. Prior to March 1, 2006 the benchmark for this composite was the JP Morgan Emerging Markets Bond Index Plus. This index is a liquid US-dollar emerging markets debt benchmark that tracks total returns for actively traded external debt instruments issued by emerging market sovereign entities: US-dollar denominated Brady bonds, Eurobonds, and loans. Countries included in the index must be rated Baa1/BBB+ or below by Moody's/S&P rating agencies. Source of the benchmark: JP Morgan. The change in benchmark was made to more accurately reflect the strategy of the composite. The financial indices referenced herein are provided for informational purposes only. The manager's holdings and portfolio characteristics may differ from those of the benchmark(s). Additional factors impacting the performance displayed herein may include portfolio-rebalancing, the timing of cash flows, and differences in volatility, none of which impact the performance of the financial indices. Financial indices reflect the reinvestment of income, if any, but do not reflect the impact of fees, applicable taxes or trading costs which may reduce the returns shown. You cannot invest directly in an index. The statistical data regarding such indices has been obtained from sources believed to be reliable. Benchmark returns are not covered by the report of independent verifiers.

6. Investing in foreign securities presents certain unique risks not associated with domestic investments such as currency fluctuation and political and economic changes. This may result in greater price volatility. Investing in emerging markets is generally riskier than investing in developed markets. Emerging market countries may have unstable governments and/or economies that are subject to sudden change. These changes may be magnified by the countries' emergent financial markets resulting in significant volatility to investments in these countries. These countries also may lack the legal, business, and social framework to support securities markets.

7. Currency and fixed income derivatives may be used in managing the portfolios. These may include forward currency contracts, currency and bond futures, swaps and options. These investments are both exchange-traded and traded over-the-counter with approved counter parties, which minimizes liquidity risk. These instruments are used in the portfolios for three purposes: timing to catch immediate market moves, providing the cheapest means of gaining or reducing interest rate and currency exposure, and creating an asymmetrical risk/return profile during times of heightened volatility. Derivatives are not used for purposes of leverage.

Emerging Markets Debt (50/50 Blend) Composite

As of December 31, 2017

Year	Composite (Gross %)	Composite (Net %)	Benchmark (%)	Composite 3 Year St Dev (%)	Benchmark 3 Year St Dev (%)	# of Portfolios	Internal Dispersion	Composite Market Value $(000s)	Firm Assets Under Mgmt $(in billions)
2017	15.83	15.20	12.74	8.30	7.61	fewer than 5	NM	792,332	708.58
2016	11.84	11.22	10.16	9.48	8.60	fewer than 5	NM	599,973	637.20
2015	-5.60	-6.12	-7.14	9.19	8.12	fewer than 5	NM	350,080	574.77
2014	1.63	1.08	0.71	10.54	9.06	fewer than 5	NM	360,565	543.29
2013	-7.41	-7.92	-7.10	11.86	9.64	fewer than 5	NM	1,064,668	405.16
2012	22.76	21.90	17.21	11.35	8.97	fewer than 5	NM	1,068,069	394.75
2011	1.25	0.55	2.79	11.60	9.72	fewer than 5	NM	787,174	335.31
2010	17.42	16.60	14.01	14.84	13.75	fewer than 5	NM	621,869	269.74
2009	33.96	33.03	25.99			fewer than 5	NM	573,299	231.88
2008	-12.72	-13.33	-8.62			fewer than 5	NM	434,932	198.16
2007-12 - 2007-12	0.64	0.58	0.41			fewer than 5	NM	74,153	201.78

	Period Ending 12/31/2017	Composite (Gross %)	Composite (Net %)	Benchmark (%)
	1 Year	15.83	15.20	12.74
	3 Year	6.94	6.35	4.87
	5 Year	2.85	2.28	1.53
	10 Year	6.98	6.31	5.49
Since	December 1, 2007	6.99	6.32	5.48

The inception date of the composite is December 1, 2007.

PGIM Fixed Income claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS standards. PGIM Fixed Income has been independently verified for the periods January 1, 1993 through December 31, 2017.

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. The Emerging Markets Debt Blend composite has been examined for the periods December 1, 2007 through December 31, 2017. The verification and performance examination reports are available upon request.

Emerging Markets Debt (50/50 Blend) Composite

As of December 31, 2017

Notes

1. PGIM Fixed Income (the "Firm") is a global asset manager primarily focused on public fixed income investments whose U.S. business operates as a unit of PGIM, Inc. PGIM, Inc. is an investment adviser registered with the United States Securities and Exchange Commission. The Firm is headquartered in Newark, New Jersey and also includes the following businesses: (i) the public fixed income unit within PGIM Limited, located in London; (ii) locally managed assets of PGIM Japan Co., Ltd ("PGIM Japan"), located in Tokyo; and (iii) the public fixed income unit within PGIM (Singapore) Pte. Ltd., located in Singapore. PGIM Japan has been included within the Firm as of June 30, 2014, resulting in an increase in assets under management (AUM) of approximately $105 billion. The Firm's list of composite descriptions is available upon request.

2. The Emerging Markets Debt Blend Composite (previously known as the Emerging Markets Debt (50/50 Blend) Composite) includes all discretionary portfolios whose investment objective is to achieve high risk-adjusted returns and outperform a diversified emerging markets debt index comprised of both sovereign and quasi-sovereign debt issues. Portfolios in this composite will seek to achieve this objective by investing in emerging markets sovereign and quasi-sovereign debt denominated in both hard and local currency debt and corporate securities. Portfolios will be managed to a blended benchmark with at least 40% including local bond components. Portfolios in this composite cannot be levered. Composite returns may include securities lending income. This composite was created on October 1, 2009.

3. Performance results are stated gross and net of model fees. Gross returns do not reflect the deduction of investment advisory fees or any other expenses that may be incurred in the management of the account. Model net returns are calculated monthly by geometrically linking 1/12th of the highest standard advisory fee in effect for the respective period to the gross composite return. The standard advisory fee schedule currently in effect is as follows: 0.55% on the first $100 million, 0.47% on the next $100 million and 0.40% thereafter. Actual client fees may vary depending on, among other things, the applicable fee schedule and portfolio size. Returns for each client will be reduced by such fees and expenses as described in their individual contract. The Firm's advisory fees (other than fees related to PGIM Japan) are disclosed in PGIM Fixed Income's SEC Form ADV Part 2A, which is available upon request. Fees related to PGIM Japan are also available upon request. Fees may be higher for commingled accounts, insurance company separate accounts, and trust, corporate, or bank-owned life insurance products. The composite shown may include accounts that are group annuity or life insurance products issued by The Prudential Insurance Company of America and/or its affiliated insurance subsidiaries. Performance has been calculated in US dollars and reflects the deduction of transaction costs and withholding taxes, if any, and the reinvestment of income. Policies for valuing portfolios, calculating performance, and preparing compliant presentations are available upon request. Past performance is not a guarantee or a reliable indicator of future results.

4. The internal dispersion of annual returns is measured by the standard deviation across the asset-weighted returns of portfolios represented in the composite for a full year. For periods where 5 or fewer accounts were included in the composite for the full year, internal dispersion is not disclosed, as it is not considered meaningful (NM). The three-year annualized standard deviation is calculated using monthly returns and measures the variability of the gross composite and benchmark returns over the preceding 36-month period.

5. The customized benchmark for this composite is an even blend of the JPMorgan Government Bond Index-Emerging Markets Global Diversified Index and the JPMorgan Emerging Markets Bond Index Global Diversified Index rebalanced monthly. The Government Bond Index-Emerging Markets Global Diversified Index (GBI-EM Global) tracks total returns for local currency bonds issued by emerging market governments while the Emerging Markets Bond Index Global Diversified (EMBI Global) tracks total returns for USD-denominated debt instruments issued by emerging market sovereign and quasi-sovereign entities: Brady bonds, loans, and Eurobonds. It limits the weights of those index countries with larger debt stocks by only including specified portions of these countries' eligible current face amounts of debt outstanding. Source of the benchmarks: JP Morgan. The financial indices referenced herein are provided for informational purposes only. The manager's holdings and portfolio characteristics may differ from those of the benchmark(s). Additional factors impacting the performance displayed herein may include portfolio-rebalancing, the timing of cash flows, and differences in volatility, none of which impact the performance of the financial indices. Financial indices reflect the reinvestment of income, if any, but do not reflect the impact of fees, applicable taxes or trading costs which may reduce the returns shown. You cannot invest directly in an index. The statistical data regarding such indices has been obtained from sources believed to be reliable. Benchmark returns are not covered by the report of independent verifiers.

6. Investing in foreign securities presents certain unique risks not associated with domestic investments such as currency fluctuation and political and economic changes. This may result in greater price volatility. Investing in emerging markets is generally riskier than investing in developed markets. Emerging market countries may have unstable governments and/or economies that are subject to sudden change. These changes may be magnified by the countries' emergent financial markets resulting in significant volatility to investments in these countries. These countries also may lack the legal, business, and social framework to support securities markets.

7. Currency and fixed income derivatives may be used in managing the portfolios. These may include forward currency contracts, currency and bond futures, swaps and options. These investments are both exchange-traded and traded over-the-counter with approved counter parties, which minimizes liquidity risk. These instruments are used in the portfolios for three purposes: timing to catch immediate market moves, providing the cheapest means of gaining or reducing interest rate and currency exposure, and creating an asymmetrical risk/return profile during times of heightened volatility. Derivatives are not used for purposes of leverage.

Aligned Investors

Principal[SM]

Los Angeles City Employees' Retirement System

MidCap Constrained Equity

April 9, 2019

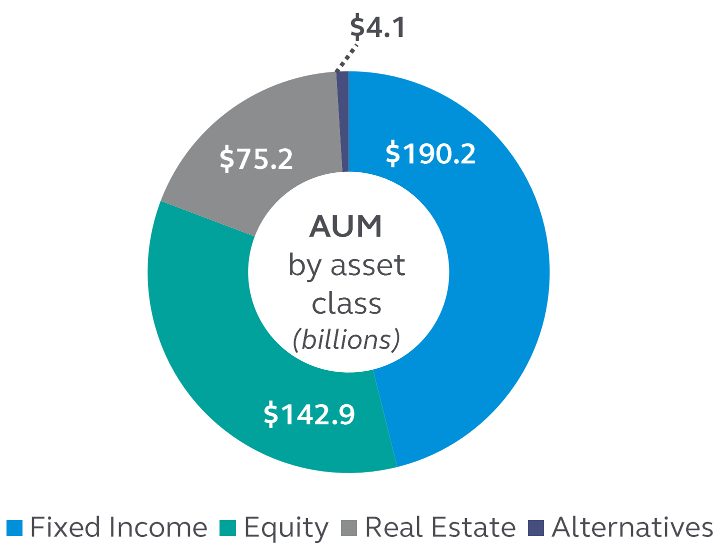
Hans Vander Plaats, CFA
Managing Director, Client Portfolio Manager

Bill Grayson
Managing Director, Senior Client Advisor

Depth of resources and support

Principal Global Investors

- Network of specialized investment teams spanning a broad array of asset classes and strategies
- Relationship management and operations personnel in major financial centers around the world
- Diverse client base, including many of the world's largest and most respected institutional investors
- $412 billion in assets under management



Principal Financial Group

- A global asset management and retirement services leader
- Serving US retirement plans since 1941, international clients since 1990
- Member of the Fortune 500®; NASDAQ listed
- $626 billion in assets under management

As of 31 December 2018
See Important Information page for AUM Description. Pensions & Investments, *"The Best Places to Work in Money Management with 1,000 or more employees"*, 12/10/2018.
Due to rounding, figures may not add up to totals or equal 100%

Partial client list

Our clients are at the core of our business

Americas $368.3B

- American Airlines, Inc.
- Boeing Pension Trust
- California Public Employees Retirement System
- California State Teachers' Retirement System
- State Board of Administration of Florida
- Teacher Retirement System of Texas

Europe $16.5B

- ABN AMRO Investment Solutions
- Barclays Wealth & Investment Management
- Credit Suisse
- MN
- PenSam
- Global bank distribution platforms
- Private banks
- German corporate pension funds

Japan $9.0B

- Daiwa SB Investment Ltd.
- Nippon Life Insurance Company
- Pension Fund Association for Local Government Officials
- Private School Mutual Aid of Japan

Asia ex-Japan/Middle East $15.6B

- China Construction Bank
- Citibank, Hong Kong
- Kiwoom Asset Management Co. Ltd
- Shinhan BNP Asset Management
- Simone Investment Managers
- Multiple confidential official sector clients

Australia/New Zealand $3.0B

- Advance Asset Management Limited
- Colonial First State
- Mercer Investments NZ Ltd.
- Qantas Superannuation Fund

As of 31 December 2018.
Regional assets under management represent client assets. All client relationships are considered strictly confidential. This list has been prepared exclusively for use in private presentations and clients listed above were selected based on region and approval to list without consideration of the performance of any such clients investments. It is not known whether the listed clients approve or disapprove of Principal Global Investors or advisory services provided. The list in no way is intended to represent an endorsement or approval of the firm's advisory services and should not be relied upon as such.

About Aligned Investors

An equity boutique of Principal Global Investors

- $21.9 billion in assets under management
- Distinctive and consistent investment philosophy and process
  - **Distinctive**: preference for companies with owner-operator management or culture
  - **Consistent**: Bill Nolin has been our lead portfolio manager since 1999
- Long-term, bottom-up, pure fundamental investors
- Established track record of delivering excess risk-adjusted returns over market cycles

> "Our belief in aligned incentives is so core to our way of investing that we would never be comfortable managing a strategy that did not involve that focus in some way."
>
> -- Bill Nolin, CFA
> Chief Investment Officer,
> Aligned Investors

As of 31 December 2018
All assets under management figures shown in this document are gross figures, before fees, transaction costs and other expenses and may include leverage, unless otherwise noted. See Important Information page for AUM Description.

The Aligned Investors team


Bill Nolin, CFA
CIO & Portfolio Manager


Tom Rozycki, CFA
Director of Research


Hans Vander Plaats, CFA
Client Portfolio Manager


Kevin McLean, CFA
Research Analyst


Nicholas Pape, CFA
Research Analyst


Austin Boaz
Research Analyst


Aaron Purcell
Research Analyst


Ben Lammers, CFA
Research Analyst


Zach Kacher
Research Analyst


Jose León, III
PM Associate


Heather Farrand
Business Manager

- Led by Bill Nolin since 1999; Tom Rozycki joined in 2001
- Analysts are generalists, with some developed areas of specialized expertise
- Paid on portfolio performance, and invested alongside clients
- Below the radar, on purpose: focused on investing and client service

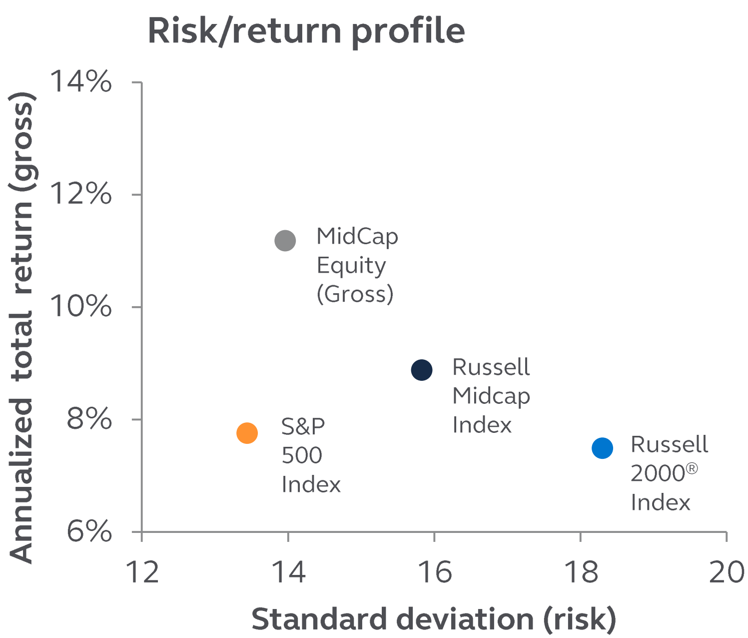
Aligned with our clients

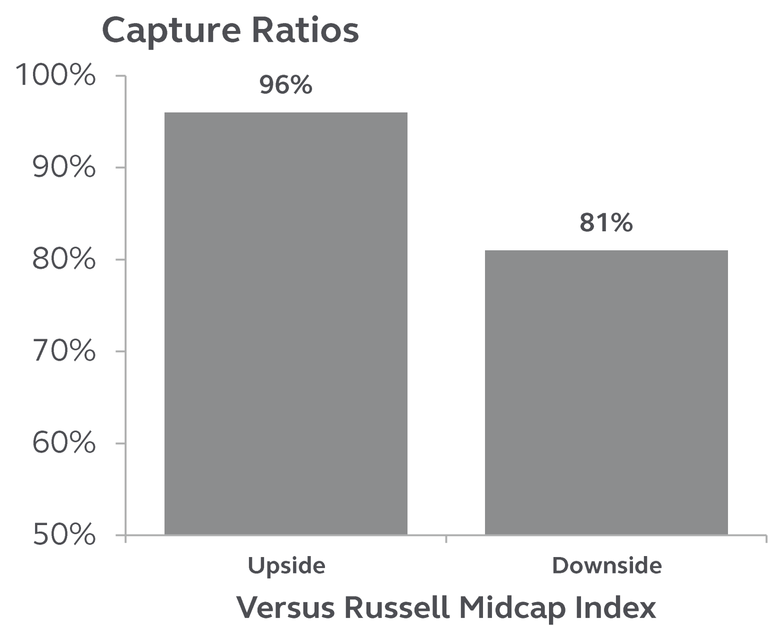
As of 31 March 2019

History of outperformance with less risk

MidCap Equity

15 years as of 31 December 2018



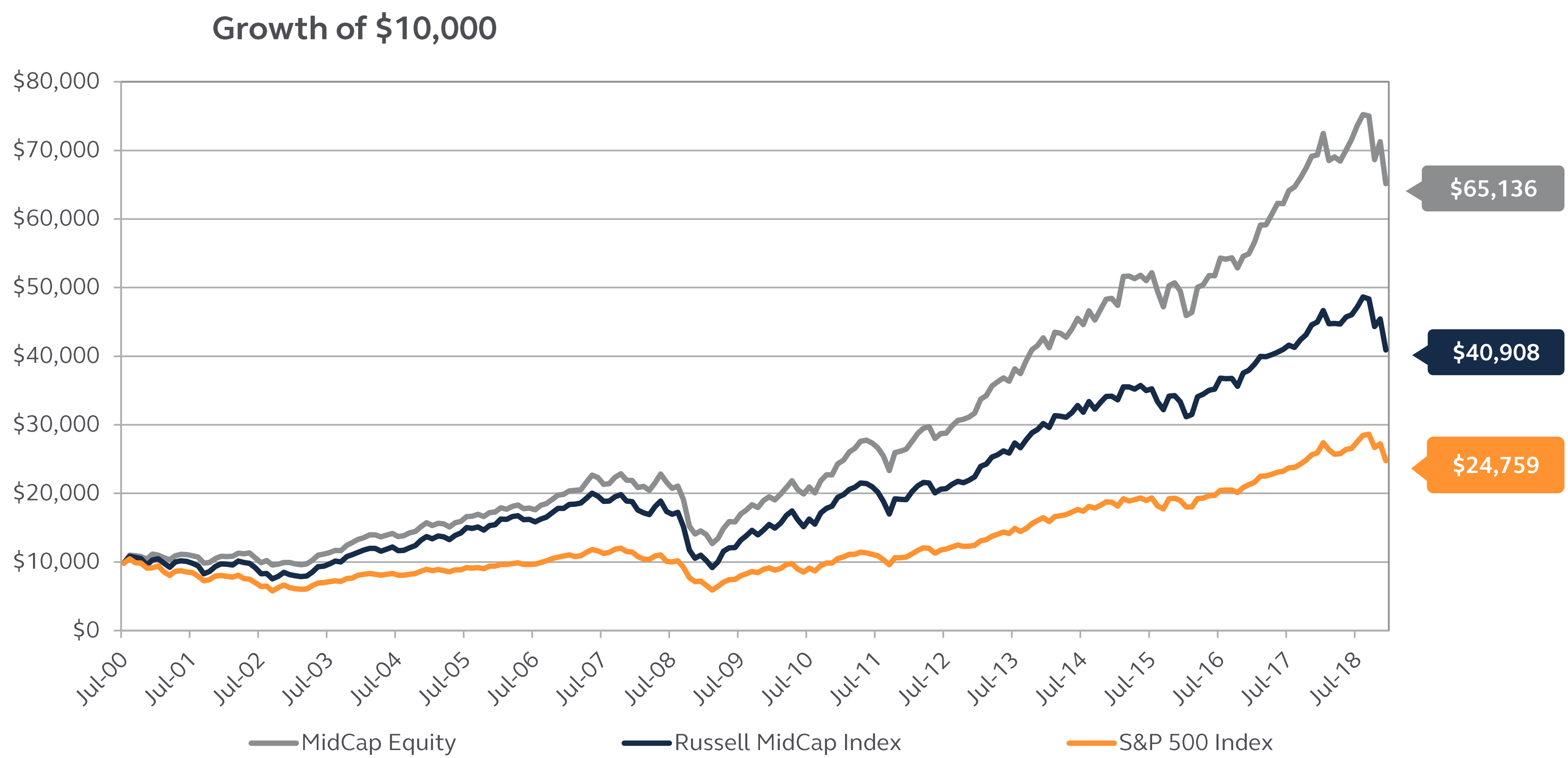


Data provided as supplemental information only and complements the composite presentation which can be found in the notes to performance section. Returns over one year are annualized. Past performance is not a reliable indicator of future performance and should not be relied upon to make investment decisions. Annualized total returns do not reflect deduction for advisory fees and consequently the actual return received by an investor will be less. Russell Investment Group is the source and owner of the trademarks, service marks & copyrights related to the Russell Indexes. Russell® is a trademark of Russell Investment Group.

Growing wealth over the long-term

MidCap Equity

As of 31 December 2018



Data provided as supplemental information only and complements the composite presentation which can be found in the notes to performance section. Returns over one year are annualized. Past performance is not a reliable indicator of future performance and should not be relied upon to make investment decisions. Annualized total returns do not reflect deduction for advisory fees and consequently the actual return received by an investor will be less. Russell Investment Group is the source and owner of the trademarks, service marks & copyrights related to the Russell Indexes. Russell® is a trademark of Russell Investment Group. Index shown for comparison purposes only. It is not possible to invest directly in an index.

Performance summary

LACERS MidCap Constrained Equity

As of 28 February 2019

	One year	Two years	Three years	Since inception*
LACERS (Net)	**10.36%**	**13.09%**	**17.51%**	**11.67%**
RUSSELL MIDCAP	5.63%	8.75%	14.46%	8.35%
Excess Return	**4.73%**	**4.34%**	**3.05%**	**3.32%**
eVestment US Mid Cap Core Equity	1.35%	6.74%	13.05%	

Portfolio market value: USD$161,075,534.51

Portfolio Objectives

Outperform the Russell Midcap Index in US$ by 2% per annum (net of fees) over a full market cycle (normally three to five years); and perform in the top quartile of a peer group of similar style equity managers over a full market cycle.

Inception Date July 23, 2014
Returns over one year are annualized. Past performance is not a reliable indicator of future performance and should not be relied upon to make investment decisions. Please refer to the accompanying notes to performance for additional disclosures and important information. Russell Investment Group is the source and owner of the trademarks, service marks & copyrights related to the Russell Indexes. Russell® is a trademark of Russell Investment Group.

Performance summary

MidCap Equity

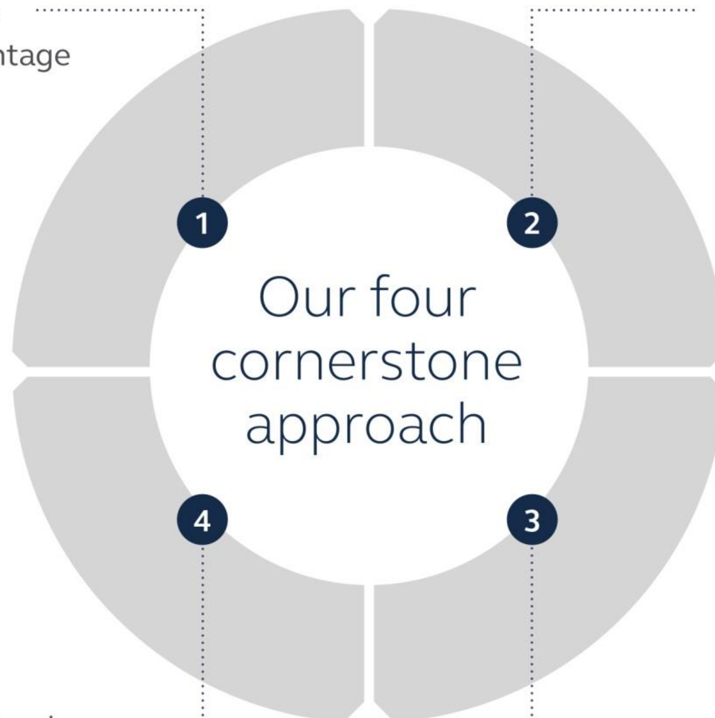
Composite performance as of 28 February 2019

	One year	Three years	Five years	Ten years	Fifteen years
MidCap Equity (Gross)	**9.89%**	**17.55%**	**11.60%**	**19.48%**	**11.88%**
Russell Midcap Index	5.63%	14.46%	8.56%	17.80%	9.57%
Excess Return	**4.26%**	**3.09%**	**3.04%**	**1.68%**	**2.31%**

Returns over one year are annualized. Past performance is not a reliable indicator of future performance and should not be relied upon to make investment decisions. Please refer to the accompanying notes to performance for additional disclosures and important information. Russell Investment Group is the source and owner of the trademarks, service marks & copyrights related to the Russell Indexes. Russell® is a trademark of Russell Investment Group.

Distinctive philosophy & process

A long-term, bottom-up, fundamental approach



1. **High-quality businesses** with a sustainable competitive advantage
2. Businesses with **owner-operator** management or culture
3. **Valuation discipline** builds in a margin of safety
4. **Focused on risk reduction** throughout the entire process

Sustainable competitive advantage

Businesses with wide economic moats

Porter's Analysis

Competitive rivalry
- Number of competitors
- Relative size of competitors
- Niche/quality differences
- Exit barriers

Power of buyer
- Number of buyers
- Switching costs
- Brand
- Price elasticity

Power of suppliers
- Number of suppliers
- Ability to substitute
- Switching costs
- Size of suppliers

Substitutes
- Relative price of substitute
- Relative quality of substitute
- Switching cost to buyer

Barriers to entry
- Economies of scale
- Switching costs of buyer
- Capital requirements
- Cost advantages
- Distribution advantages

Owner-operator management or culture

Two key advantages

How they operate the business

- Passionate
- Low expenses
- Knowledge that leads to innovation

How they allocate capital

- Counter-cyclical
- Interests aligned with shareholders
- Long-term perspective

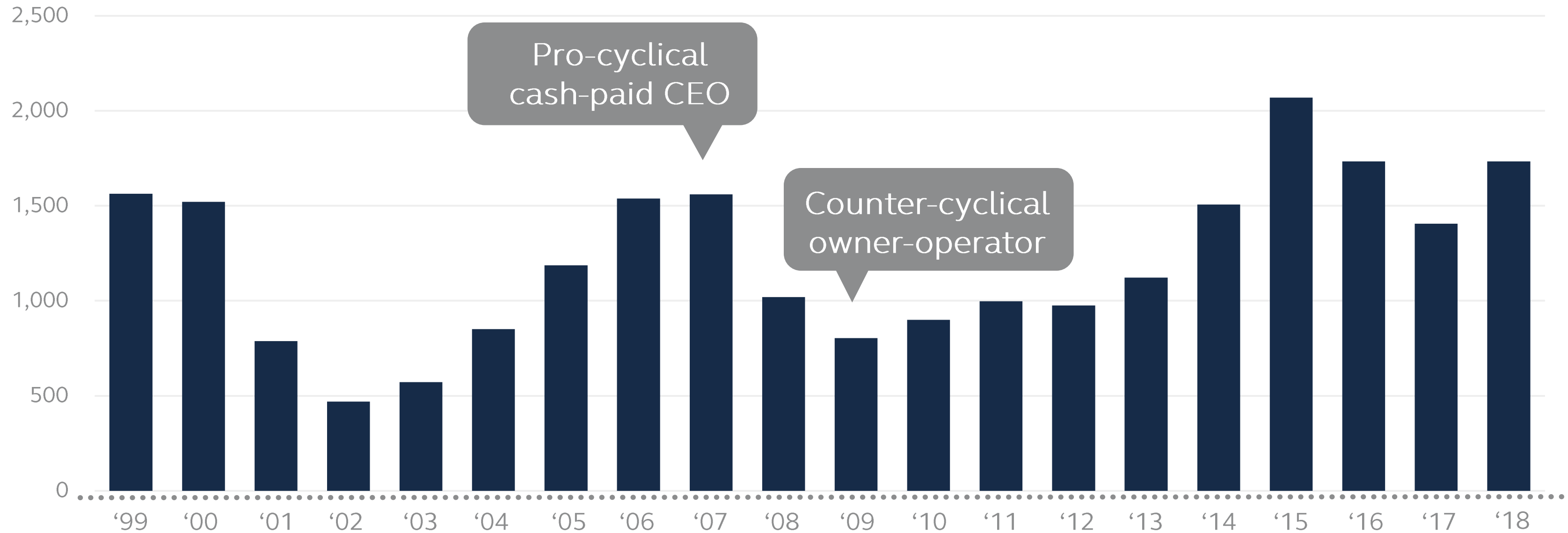
"I've been in the top 5% of my age cohort all my life in understanding the power of incentives, and all my life I've underestimated it."

– Charlie Munger, vice chairman of Berkshire Hathaway

A different perspective on M&A

Owner-operator CEOs versus cash-paid CEOs

US M&A activity • $US billions

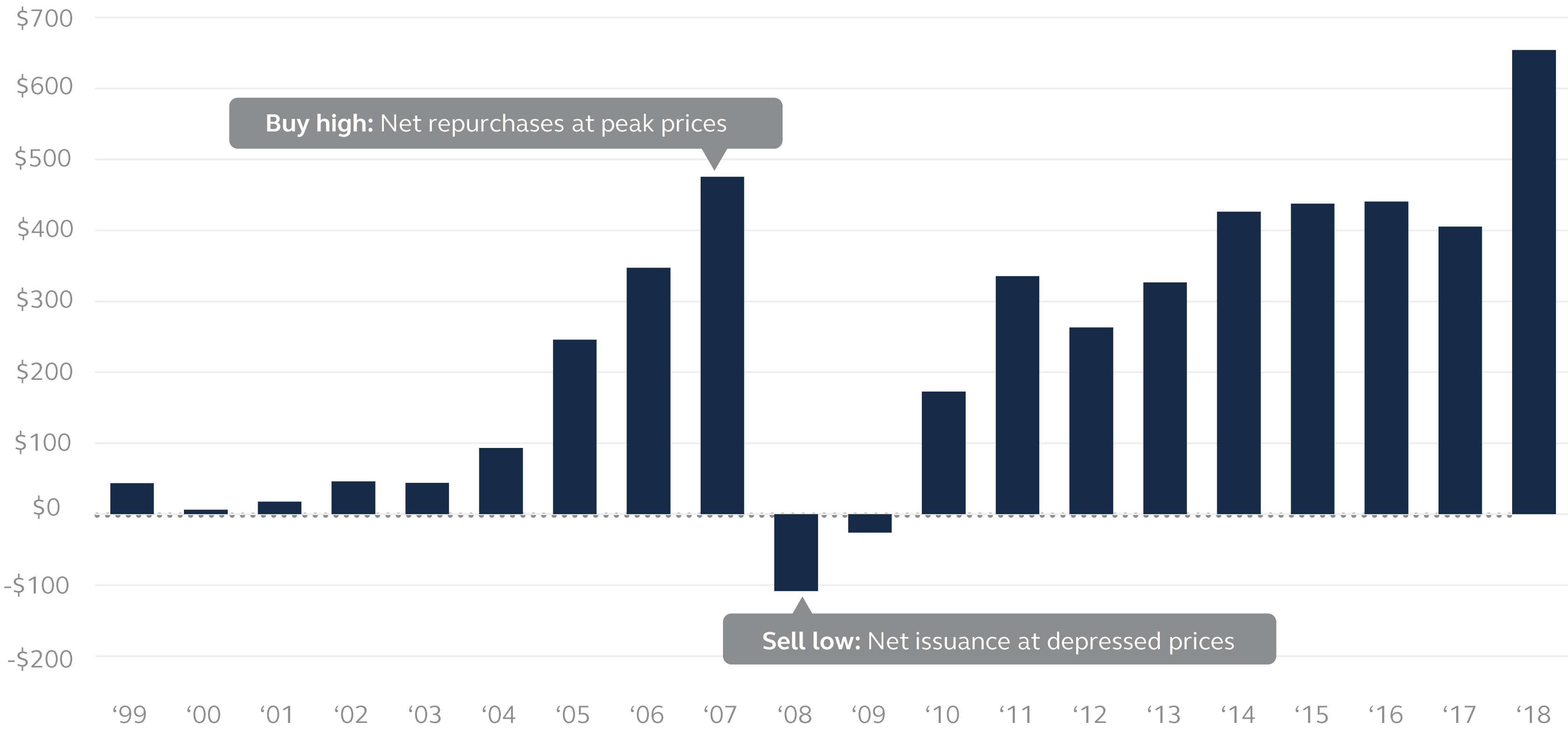


As of 31 December 2018. Source: Bank of America Merrill Lynch. The examples shown are hypothetical, are for illustrative purposes only, and do not represent the activities of any specific companies. See important information slide for additional details.

A more thoughtful approach to repurchases

Most CEOs buy high and sell low

Net stock repurchases, Russell 3000® Index • $US billions



As of 31 December 2018. Source: Bank of America Merrill Lynch. The examples shown are hypothetical, are for illustrative purposes only, and do not represent the activities of any specific companies. See important information slide for additional details.

Owner-operator focus

Management teams of portfolio companies

Owner-operator founder or co-founder; second generation family; meaningful stake

Management team with an owner-operator culture; think and act like an owner

Cash-paid CEO

Buckets 1 and 2 typically make up more than 75% of our portfolios

The owner-operator analysis assigns companies into one of the three buckets and is based upon the subjective review of a combination of proprietary research and publicly available information at the time of the publication. This analysis is for information purposes only and demonstrates one of the many steps in the research process related to this strategy. The final decision on which bucket a company ultimately is allocated to is subjective, and based solely upon the views of the research team. The allocations to the buckets represented in this slide many change over time and are not a component of the individual guidelines of the strategy.

Value discipline

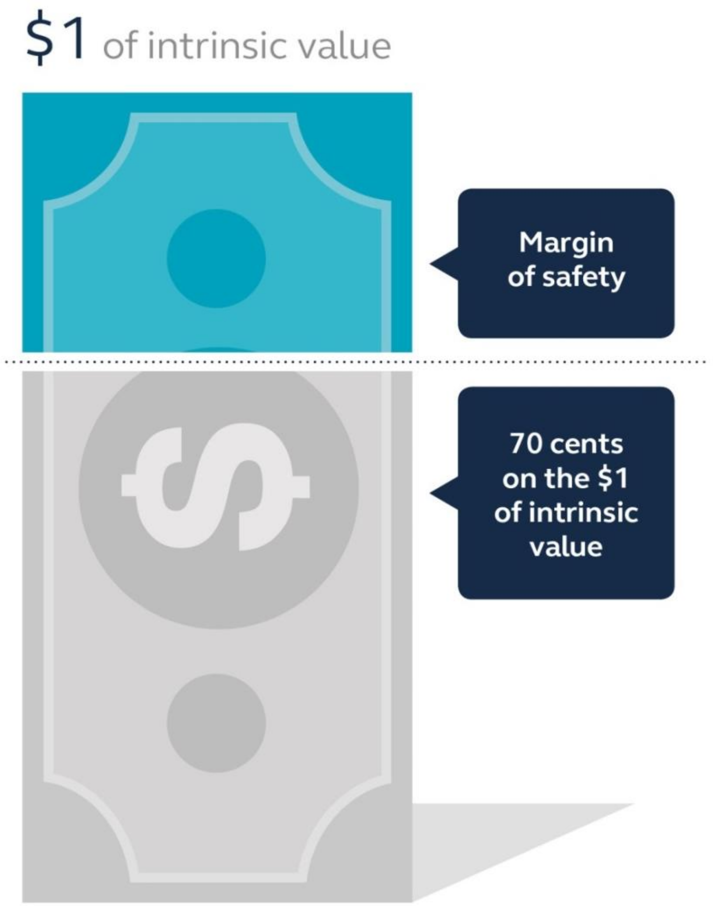
Creating a margin of safety

Fundamental review

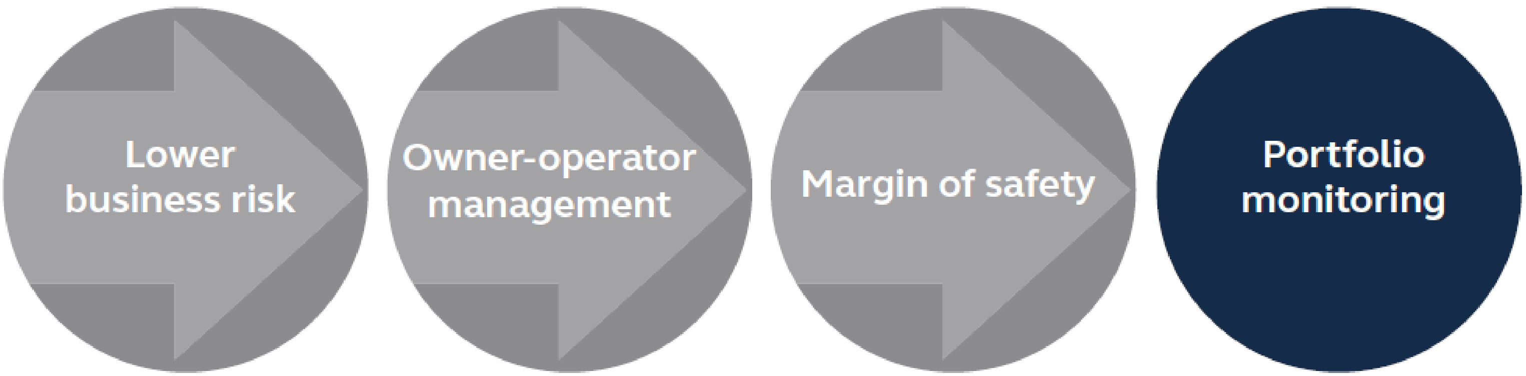
- Industry leadership
- Porter's analysis
- Sustainability
- Management team

Analyst's forecast and valuation

- Income statement and balance sheet
- Discounted cash flows



Risk reduction throughout our entire process



Monitoring for “early warning signals” of fundamental change, such as:

- Eroding barriers to entry
- Emergence of new competitor
- Disruptive technology
- Regulatory change
- Questionable allocation of capital
- Change in accounting methodology

Portfolio guidelines

LACERS MidCap Constrained Equity

- High conviction, yet sensibly diversified exposure to the U.S. mid-cap equity universe
- No style extremes or excessive concentration in one sector
- Long-term investment focus results in relatively low portfolio turnover

Sector	± 20%
Industry	± 20%
Individual stock weights	± 5%
Number of holdings	80-120
Expected turnover	15-40%
Cash	<5%
Tracking error range	5% - 6%

+/-30% of the weighted average market capitalization of the Russell Midcap Index, as defined by Bloomberg and Russell.

These guidelines represent current practice and may be subject to change

Top 20 holdings

LACERS MidCap Constrained Equity

As of 28 February 2019

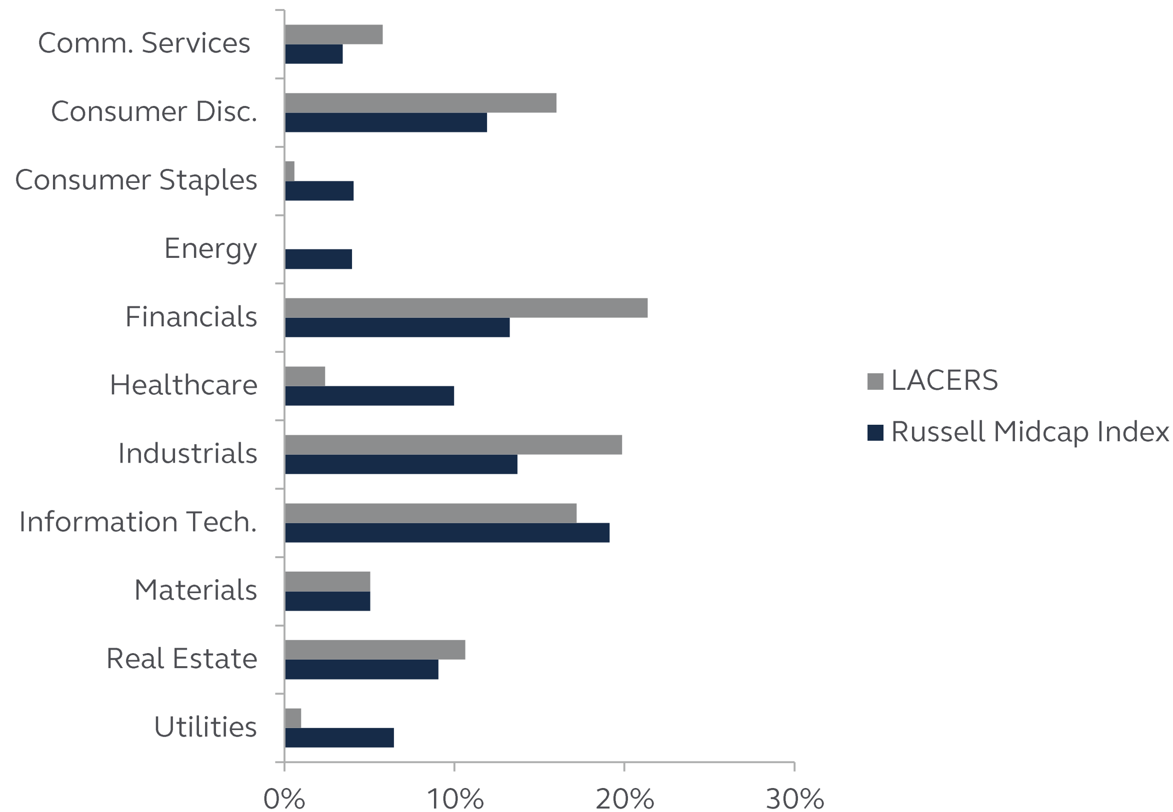
Company	Portfolio weight %		
TransDigm Group Incorporated	5.0	CBRE Group, Inc. Class A	2.3
SBA Communications Corp. Class A	4.8	Verisk Analytics Inc	2.3
Brookfield Asset Management Inc. Class A	4.0	Copart, Inc.	2.2
O'Reilly Automotive, Inc.	3.4	Black Knight, Inc.	2.1
Markel Corporation	3.2	Vulcan Materials Company	2.1
Gartner, Inc.	3.0	First Republic Bank	2.0
VeriSign, Inc.	2.6	Fidelity National Financial, Inc. - FNF Group	2.0
CarMax, Inc.	2.6	Moody's Corporation	2.0
IHS Markit Ltd.	2.4	Roper Technologies, Inc.	1.9
Hilton Worldwide Holdings Inc	2.4	Martin Marietta Materials, Inc.	1.9
		% of portfolio	**54.1**

It should not be assumed that securities identified above will prove to be profitable. Any reference to a specific security does not constitute a recommendation to buy, sell or hold such security. The information shown above is from the representative portfolio of the MidCap Equity strategy and is shown as supplemental information to the Annual Disclosure Presentation which can be found in the Notes to Performance section. Top 20 largest holdings by weight may not reflect current holdings.

Sector weights

LACERS MidCap Constrained Equity

As of 28 February 2019



It should not be assumed that securities identified above will prove to be profitable. Any reference to a specific security does not constitute a recommendation to buy, sell or hold such security. The information shown above is from the representative portfolio of the MidCap Equity strategy and is shown as supplemental information to the Annual Disclosure Presentation which can be found in the Notes to Performance section.

Performance attribution

LACERS MidCap Constrained Equity

28 February 2018 – 28 February 2019

	Portfolio weight	Portfolio return	Benchmark weight	Benchmark return	Attribution analysis: Allocation effect	Selection + interaction	Total effect
Industrials	21.39	22.15	13.95	2.52	-0.25	4.02	3.77
Financials	21.81	6.86	13.87	-3.24	-0.69	2.17	1.48
Consumer Discretionary	19.90	6.08	13.21	0.87	-0.30	1.06	0.76
Materials	4.92	-1.61	5.32	-8.00	0.07	0.39	0.46
Information Technology	15.61	21.02	17.81	16.28	-0.21	0.56	0.35
Energy	--	--	5.11	-5.33	0.34	--	0.34
Consumer Staples	0.46	-8.93	4.15	-1.08	0.27	-0.03	0.24
Communication Services	2.46	-2.40	1.74	11.76	-0.16	0.28	0.12
Real Estate	10.18	8.78	8.89	18.33	0.20	-0.89	-0.69
Utilities	0.84	4.43	6.11	20.68	-0.63	-0.10	-0.73
Health Care	2.30	-18.62	9.84	7.55	-0.12	-0.83	-0.94
Cash	0.13	2.11	--	--	-0.00	--	-0.00
Total	**100.00**	**10.78**	**100.00**	**5.63**	**-1.48**	**6.64**	**5.16**

Source: FactSet
Benchmark is the Russell Midcap Index. The information shown above is from the representative portfolio of the MidCap Equity strategy and is shown as supplemental information to the Annual Disclosure Presentation which can be found in the Notes to Performance section. Past performance does not guarantee future results

Performance contribution

LACERS MidCap Constrained Equity

28 February 2018 – 28 February 2019

Top five contributors	Portfolio weight	Total contribution
TransDigm Group Incorporated	4.89	2.14
O'Reilly Automotive, Inc.	3.58	1.53
VeriSign, Inc.	2.48	1.12
Autodesk, Inc.	2.44	0.83
SBA Communications Corp.	4.61	0.74
Top five detractors		
DENTSPLY SIRONA, Inc.	1.06	-0.78
Mohawk Industries, Inc.	0.95	-0.64
Markel Corporation	3.73	-0.44
Colfax Corporation	1.42	-0.32
Dollar Tree, Inc.	0.43	-0.28

Source: FactSet
Past performance does not guarantee future results. Contributors and detractors do not represent all of the securities purchased, sold or recommended for advisory clients during the quarter. A list of recommendations made, and every holding's contribution to the representative account for the strategy during the past twelve months is available upon request. It should not be assumed that recommendations made in the future will be profitable or equal the performance of the securities listed. Past performance does not guarantee future results.

Portfolio position changes

LACERS MidCap Constrained Equity

28 February 2018 – 28 February 2019

Top five positive changes	Sector	Previous weight	Current weight	Weight movement
Hilton Worldwide Holdings, Inc.	Consumer Disc	0.4%	2.4%	2.0%
ANSYS, Inc.	Information Tech	0.0%	1.8%	1.8%
Vail Resorts, Inc.	Consumer Disc	0.0%	1.6%	1.6%
Mettler-Toledo International Inc.	Health Care	0.0%	1.5%	1.5%
First Republic Bank	Financials	0.5%	2.0%	1.5%
Total		**1.0%**	**9.4%**	**8.4%**

Top five negative changes	Sector	Previous weight	Current weight	Weight movement
Moody's Corporation	Financials	5.3%	2.0%	-3.3%
Ross Stores, Inc.	Consumer Disc	2.9%	0.1%	-2.8%
DENTSPLY SIRONA, Inc.	Health Care	2.4%	0.0%	-2.4%
Dollar Tree, Inc.	Consumer Disc	2.1%	0.0%	-2.1%
Fidelity National Information Services, Inc.	Information Tech	1.9%	0.0%	-1.9%
Total		**14.5%**	**2.1%**	**-12.4%**

Due to rounding, the sum may not equal the total shown. It should not be assumed that securities identified above will prove to be profitable. Any reference to a specific security does not constitute a recommendation to buy, sell or hold such security. Past performance is not a reliable indicator of future performance and should not be relied upon to make investment decisions.

Choosing Aligned Investors

- Distinctive and consistent philosophy and process
- Focused on risk-adjusted returns over full market cycles
- Aligned with clients through investments of personal money in our strategies
- Demonstrated history of success

Additional information

Professional credentials

K. William Nolin, CFA – CIO, Portfolio Manager
Bill is the chief investment officer for Aligned Investors, an investment boutique within Principal Global Investors. He has served as lead portfolio manager for the Principal MidCap Fund since its 2001 inception and related portfolios since 1999. Bill and his dedicated investment team subsequently introduced the Principal Blue Chip strategy in 2012, utilizing the same philosophy and process while extending the team's reach to larger companies. Bill joined Principal in 1993 in corporate credit research and transitioned to equities research in 1996. He earned an MBA from the Yale School of Management, and a bachelor's degree in finance from the University of Iowa. Bill is a CFA charterholder and a member of the CFA Institute.

Thomas Rozycki, CFA – Head of Research, Portfolio Manager
Tom is the head of research for Aligned Investors, an investment boutique within Principal Global Investors. He is responsible for coordinating the research effort at Aligned Investors and also serves as portfolio manager for its MidCap and Blue Chip strategies. Tom joined the firm in 2001. He received a bachelor's degree in finance from Drake University. Tom is a CFA charterholder and a member of the CFA Institute.

Hans Vander Plaats, CFA – Managing Director, Client Portfolio Manager
Hans is the client portfolio manager for Aligned Investors, an investment boutique of Principal Global Investors. He is responsible for overseeing client portfolio management for the firm's MidCap and Blue Chip equity strategies. In this role Hans is a member of the investment management team while also coordinating the boutique's business development and client relations activities. Hans joined the firm in 2012 after serving in multiple roles for AXA US. He received a bachelor's degree in economics and finance from Northwestern College. Hans is a CFA charterholder and a member of the CFA Institute.

Professional credentials

Kevin McLean, CFA – Research Analyst
Kevin is a research analyst for Aligned Investors, an investment boutique within Principal Global Investors. Kevin focuses on company research for the boutique's MidCap and Blue Chip strategies. He joined Principal in 2007. Previously, Kevin served as an equity analyst for Roxbury Capital Management and a business analyst for Ameriprise Financial. He received a bachelor's degree in finance and information systems from Drake University. Kevin is a CFA charterholder and a member of the CFA Institute.

Nicholas Pape, CFA – Research Analyst
Nic is a research analyst for Aligned Investors, an investment boutique within Principal Global Investors. Nic focuses on company research for the boutique's MidCap and Blue Chip strategies. He joined Principal in 2013. Previously, Nic served as a senior investment analyst at Chicago Fundamental Investment Partners, as an equity research associate at RBC Capital Markets, and as a portfolio management associate at Principal. Nic received an MBA from the University of Chicago and a bachelor's degree in finance from Creighton University. He is a CFA charterholder and a member of the CFA Institute.

Austin Boaz – Research Analyst
Austin is a research analyst for Aligned Investors, an investment boutique within Principal Global Investors. Austin focuses on company research for the boutique's MidCap and Blue Chip strategies. He joined Principal in 2015. Previously, Austin served as a research analyst at Stockbridge Investors and an investment banking analyst at Lazard Frères & Co. Austin received a bachelor's degree in accounting from Brigham Young University.

Aaron Purcell – Research Analyst
Aaron is a research analyst for Aligned Investors, an investment boutique of Principal Global Investors. Aaron focuses on company research for the boutique's MidCap and Blue Chip strategies. He joined Principal in 2016. Previously, Aaron served as an associate at Riverside Partners, a private equity firm, and an investment banking analyst at Citigroup Global Markets. Aaron earned an MBA from Columbia Business School where he completed the value investing program, and earned a bachelor's degree in finance from Brigham Young University.

Professional credentials

Ben Lammers, CFA – Research Analyst
Ben is a research analyst for Aligned Investors, an investment boutique of Principal Global Investors. Ben focuses on company research for the boutique’s MidCap and Blue Chip strategies. He joined Principal in 2017. Previously, Ben served as a research analyst at Institutional Capital and an investment banking analyst at Bank of America Merrill Lynch. Ben attended Creighton University, where he earned a master's degree in security analysis and portfolio management as well as a bachelor's degree in finance. He is a CFA charterholder and a member of the CFA Institute.

Zach Kacher – Research Analyst
Zach is a research analyst for Aligned Investors, an investment boutique within Principal Global Investors. Zach focuses on company research for the boutique’s MidCap and Blue Chip strategies. He joined Principal in 2019. Previously, Zach served as an associate at Peterson Partners and an investment banking analyst at Citigroup Global Markets. Zach received master’s and bachelor's degrees in accounting from Brigham Young University.

Jose Leon, III – Portfolio Management Associate
Jose is a portfolio management associate for Aligned Investors, an investment boutique within Principal Global Investors. He handles many of the daily operational tasks related to managing the portfolios and supports the boutique’s client relationship efforts. Jose joined the firm in 2018. He received a bachelor’s degree in finance and marketing from Northwestern College, where he was also the recipient of the business department’s Outstanding Graduating Senior Award.

Heather Farrand – Business Manager
Heather is a business manager for Aligned Investors, an investment boutique within Principal Global Investors. She joined Principal in 2005 as an administrative assistant. She received her associate’s degree from AIB College of Business where she was employed prior to joining Principal.

Professional credentials

William A. Grayson - Director – Institutional Advisory Services

Bill is a director - institutional advisory services at Principal Global Investors. He joined the firm in early 2000. Previously, Bill was marketing director for a fixed-income unit of Bank of America. Prior to that, he spent more than a decade as a relationship manager with Bankers Trust Company and Boatmen's Trust Company working primarily with Taft-Hartley and public funds. Bill received a bachelor's degree in economics from Southwest Missouri State University and his Certified Employee Benefit Specialist Designation from the University of Pennsylvania Wharton School of Business. He is a Registered Representative of Principal Securities, Inc. and passed the FINRA Series 7 and 63 examinations.

Workforce composition

LACERS
LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM

Vendor	**Name Principal Global Investors, LLC**					Date Completed: **03/12/2019 (data as of 03/01/2019)**			
Address	**Address Des Moines, Iowa**								
Principal Global Investors - Data as of 03.01.2019 - **US ONLY, only included employees that fit into below categories**									
Category	**Asset Class Mid Cap Equity**								

TOTAL COMPOSITION OF WORK FORCE									
	African American	**Hispanic**	**Asian or Pacific Islander**	**American Indian/ Alaskan Native**	**Caucasian (Non Hispanic)**	**Total Employees**	**Percent (%) Minority**	**Gender**	
								Male	**Female**
Occupation	**Full Time**	**Full Time**	**Full Time**	**Full Time**	**Full Time**	**Full Time**	**Full Time**	**Full Time**	
Officials & Managers	1	2	10	0	268	**281**	**4.63%**	186	95
Professionals	12	40	64	0	854	**970**	**11.96%**	548	422
Technicians	0	0	0	0	0	**0**	**0.00%**	0	0
Sales Workers	0	2	2	0	60	**64**	**6.25%**	54	10
Office/Clerical	0	4	2	0	35	**41**	**14.63%**	1	40
Semi-Skilled	0	0	0	0	0	**0**	**0.00%**	0	0
Unskilled	0	0	0	0	0	**0**	**0.00%**	0	0
Service Workers	0	0	0	0	0	**0**	**0.00%**	0	0
Other	0	0	0	0	0	**0**	**0.00%**	0	0
Total	**13**	**48**	**78**	**0**	**1,217**	**1,356**	**10.25%**	**789**	**567**

Workforce diversity

Sustaining a culture of diversity and inclusion at Principal, we define diversity as “the mix.” We all have unique characteristics, experiences, backgrounds, talents, values, and qualities. We define inclusion as making the most of “the mix.” We welcome, value, and empower everyone to be their best selves.

A connected community: Our Connected Community includes more than 4,300 employees in seven Employee Resource Groups (ERGs) and six women’s networks. In 2017, our women’s networks expanded internationally with Prerana, a network that supports diversity and inclusion efforts in India by helping women network and grow their professional skills.

ERGs serve as networking, mentoring, and social channels for employees, providing safe havens for discussion and support. They meet to talk about current events and social issues, such as LGBTQ+ rights and racial injustice, and then brainstorm positive solutions within Principal and out in their communities.

ERGs also provide development opportunities and create education and awareness for all employees (via Black History Month, Chinese New Year, and other cultural celebrations and events). ERG members refer candidates for job opportunities, serve on diversity panels, lead new employee tours, attend campus/job fairs, volunteer at community events, and more.

Active ERGs:
- African American/Black Employee Resource Group
- Asian Employee Resource Group
- Empowered Employee Resource Group
- Hispanic/Latino Employee Resource Group
- Lesbian/Gay/Bisexual/ Transgender/+ Employee Resource Group
- OneABILITY Employee Resource Group
- Veterans Employee Resource Group

Women’s groups:
- Women in Leadership
- Women in Sales
- Women in Technology Group
- Prerana
- Women in Real Estate
- Women Advisors

Notes to performance

Index descriptions

Russell Midcap Index is an index that measures the performance of the 800 smallest companies in the Russell 1000 index, which represents approximately 24% of the total market capitalization of the Russell 1000 Index.

Standard & Poor's (S&P) 500 Index is market-value-weighted index composed of 500 common stocks from a wide range of industries that are traded on the New York Stock Exchange, the American Stock Exchange, and the NASDAQ. An investor may not invest in this index.

Russell 1000® Growth Index measures the performance of the large-cap growth segment of the US equity universe. It includes those Russell 1000® Index companies with higher price-to-book ratios and higher forecasted growth values. The Russell 1000® Growth Index is constructed to provide a comprehensive and unbiased barometer for the large-cap growth segment. The Index is completely reconstituted annually to ensure new and growing equities are included and that the represented companies continue to reflect growth characteristics.

Russell 2000® Index is an unmanaged index comprising common stocks of the 2000 US public companies next in size after the largest 1000 publicly traded US companies. An investor may not invest in this index.

Russell 3000® Index measures the performance of the largest US companies based on total market capitalization, which represent approximately 98% of the investable US equity market. Information regarding the comparison to the Russell 3000® Index is available upon request.

Source Disclosures

*Russell Investment Group is the source and owner of the trademarks, service marks & copyrights related to the Russell Indexes. Russell® is a trademark of Russell Investment Group.

Attribution disclosures

Return-based performance attribution is calculated using Fact Set and will result in differences from official performance results generated through our portfolio accounting and performance measurement systems. These differences are generally minor over short time periods but can compound over longer time horizons, and have the potential to be greater during periods of market volatility. Differentials in performance can be particularly significant for periods over 12 months. While the attribution data can provide a high level perspective on the proportional sources of value added, such as the relative contribution of stock selection versus sector allocation, the nominal returns generated by the attribution will differ from those of the official portfolio results. If the country chart contains an Other category, a supplemental chart will be provided.

Annual disclosure presentation

Aligned Investors

The information in this document should not be construed as investment advice or a recommendation for the purchase or sale of any security. Past performance is not a reliable indicator of future performance and should not be relied upon to make investment decisions. The value of investments and the income from them may fall as well as rise. The information in this document derived from sources other than Principal Global Investors or its affiliates is believed to be reliable; however we do not independently verify or guarantee its accuracy or validity.

Aligned Investors (The"Firm") is an autonomous investment group within Principal Global Investors that utilizes a completely fundamental, long-term bottom-up approach. The name Aligned Investors highlights the group's conviction in the power of aligned incentives. This focus is expressed in the investment process through a distinctive preference for owner-operators. Prior to January 1, 2015 Aligned was defined as an equity investment management group of Principal Global Equities and Principal Global Investors. This change was made to hold Aligned out as a distinct firm from Principal Global Equities.

Aligned Investors claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS standards. Aligned Investors has been independently verified for the periods April 1, 2000, through December 31, 2017. A copy of the verification report(s) is/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 maintains a complete list and description of composites, which is available upon request.

Results are based on fully discretionary accounts under management, including those accounts no longer with the Firm. Performance results reflect total returns including income and market value changes. Accrued Accounting is used for securities that accrue income. Performance results are time-weighted rates of return, net of commissions and transaction costs. No alterations of composites as presented here have occurred because of changes in personnel or other reasons at any time. Monthly and quarterly composite calculations have been appropriately weighted by the size of each portfolio based on beginning market values. Annual and multiyear cumulative annualized composite returns are obtained by linking monthly composite results.

Unless otherwise noted, the U.S. Dollar is the currency used to express performance. Returns include the reinvestment of all income. Returns from all securities, including cash reserves and equivalents and/or convertible/preferred securities held within equity portfolios are included in performance calculations. Actual returns will be reduced by investment advisory fees and other expenses that may be incurred in the management of the account. If applicable, the annual composite dispersion presented is an asset-weighted standard deviation calculated for the accounts in the composite the entire year.

Periods after January, 2001, net returns can be either calculated by applying actual client fees for non-affiliated clients or a model tiered fee schedule for affiliated clients, unless otherwise noted. Composite net returns after January 1, 2011, are inclusive of performance-based fees (where applicable). Performance-based fees are accounted for on a cash basis. Prior to January 2003 certain commingled funds which returns may be utilized in a Composite's performance track record had net returns that reflected a deduction for administrative fees in addition to direct trading expenses and investment management fees. Therefore, the average fees will be higher during these time periods.

The index benchmarks are referred to for comparative purposes only and are not necessarily intended to parallel the risk or investment approach of the portfolios included in the composites. Representative portfolios utilized to illustrate portfolio characteristics are selected on non-performance-based criteria including account restrictions, size that is representative of strategy, length of time under advisor's management and affiliation.

Unless otherwise noted, for all international, global and regional portfolios, index performance is presented net of all foreign withholding taxes. Composite withholding taxes may vary according to the investor's domicile and reflect actual taxes incurred. Information regarding the benchmark, including the percentage of the composite invested in countries or regions not included in the benchmark, is available upon request. Returns include the effect of foreign currency exchange rates. In some cases regional composites and indices are reflected gross of withholding taxes on dividends. This is done to reflect the primary return methodology of the index.

The information in this document contains general information only on investment matters and should not be considered as a comprehensive statement on any matter and should not be relied upon as such. The general information it contains does not take account of any investor's investment objectives, particular needs or financial situation, nor should it be relied upon in any way as a forecast or guarantee of future events regarding a particular investment or the markets in general. All expressions of opinion and predictions in this document are subject to change without notice.

Subject to any contrary provisions of applicable law, no company in the Aligned Investors nor any of their employees or directors gives any warranty of reliability or accuracy nor accepts any responsibility arising in any other way (including by reason of negligence) for errors or omissions in this document.

Disclosure

MidCap Equity (USD)

	Total Firm Assets (USD)		Composite Assets	Annual Performance Results (USD)						
Year End	AUA* (millions)	AUM (millions)	USD (millions)	Number of Accounts	Gross Annual Return	Net Annual Return	Benchmark Annual Return	Composite Dispersion	Composite 3-Yr St Dev	Benchmark 3-Yr St Dev
2017	24,454	22,495	18,772	10	26.24%	25.67%	18.52%	0.02%	11.28	10.36
2016	18,487	17,234	14,738	10	11.00%	10.49%	13.80%	0.02%	12.27	11.55
2015	16,476	15,667	13,618	11	2.13%	1.67%	-2.44%	0.03%	11.44	10.85
2014	14,138	13,689	12,458	12	13.51%	13.00%	13.22%	0.05%	9.43	10.14
2013	11,733	11,733	10,621	12	34.59%	33.98%	34.76%	N/A	12.09	14.03
2012	6,278	6,278	6,029	<=5	19.99%	19.44%	17.28%	N/A	14.29	17.20
2011	3,955	3,955	3,876	<=5	8.79%	8.29%	-1.55%	N/A	17.22	21.55
2010	3,286	3,286	3,227	<=5	24.63%	24.05%	25.48%	N/A	21.76	26.46
2009	2,702	2,702	2,654	<=5	34.06%	33.43%	40.48%	N/A	20.42	24.21
2008	1,698	1,698	1,682	<=5	-33.50%	-33.81%	-41.46%	N/A	17.20	19.36

* Supplemental Information, Assets Under Advisement (AUA) includes both actual assets managed by the firm and assets under advisement.

N/A - Information is not statistically meaningful due to an insufficient number of portfolios in the composite for the entire year or not having enough data during the time period in question.

COMPOSITE- The MidCap Equity composite contains fully discretionary portfolios that invest in the equity securities of mid-capitalization companies primarily in the U.S. The investment strategy emphasizes high quality businesses with sustainable competitive advantages, utilizing a long term, fundamental approach. The composite is measured against the Russell Midcap Index. The MidCap Equity composite was created in January 1997. The composite name changed from U.S. Mid-Cap Equity to MidCap Equity effective November 30, 2015.

BENCHMARK- The Russell Midcap Index measures the performance of the 800 smallest companies in the Russell 1000 Index. In reports issued prior to January 1, 2001, the S&P 500 Index was used for comparison purposes. The benchmark was changed to be more representative of the composite strategy. Information regarding the comparison to the benchmarks is available upon request.

PERFORMANCE- Returns are presented gross and net of management fees and include the reinvestment of all income. Actual returns will be reduced by investment advisory fees presented. Policies for valuing portfolios, calculating performance, and preparing compliant presentations are available upon request.

SIGNIFICANT CASHFLOW- Effective February 1, 2013, the composite significant cash flow policy requires the temporary removal of any portfolio incurring a single client initiated significant cash inflow or outflow of 40% of the portfolio's NAV on any one day during the month in review. Effective January 1, 2010, this composite did not have a significant cash flow policy. Prior to the change, as of April 1, 2003, the composite significant cash flow policy required the temporary removal of any portfolio incurring a single client initiated significant cash inflow or outflow of 33% of the portfolio's NAV on any one day during the month in review. As of January 1, 2006, the cash flow policy was only effective when the composite includes two or more portfolios. The temporary removal of such an account occurs at the beginning of the month in which the single significant cash flow occurs and the account re-enters the composite the month after the cash flow. Additional information regarding the treatment of significant cash flows is available upon request.

FEES- The standard applicable MidCap Equity asset management (USD) fee schedule is 0.60% on the first $50 million, 0.55% on the next $50 million, and 0.45% on all thereafter. Actual investment advisory fees incurred by clients may vary.

Important information

Under no circumstances shall BofA Merrill Lynch or their affiliates be liable to you or any third party for any damages (including but not limited to direct, indirect, special and consequential damages), losses, expenses, fees, or other liabilities that directly or indirectly arise from this license, the Report or the Content or your use of the materials. You hereby waive and release BofA Merrill Lynch and their affiliates from any claims for damages, losses, expenses, fees, liabilities, causes of action, judgments and claims arising out of or related to your use of the Report or the Content, whether now existing or arising in the future.

You recognize that information contained in the Content or Report may become outdated and that BofA Merrill Lynch and their affiliates are under no obligation to update the Content or Report or notify you of any changes to the Content or Report. The Report and Content are provided "AS IS," and none of BofA Merrill Lynch nor their affiliates make any warranty (express or implied) with respect to the Report or any content including the Content, including, without limitation, any warranty of ownership, validity, enforceability or non-infringement, the accuracy, timeliness, completeness, adequacy, merchantability, fitness for a particular purpose, or suitability of the material for any intended audience.

Important information

Unless otherwise noted, the information in this document has been derived from sources believed to be accurate as of October 2018. Information derived from sources other than Principal Global Investors or its affiliates is believed to be reliable; however, we do not independently verify or guarantee its accuracy or validity. This material contains general information only and does not take account of any investor's investment objectives or financial situation and should not be construed as specific investment advice, recommendation or be relied on in any way as a guarantee, promise, forecast or prediction of future events regarding an investment or the markets in general. The opinions and predictions expressed are subject to change without prior notice. Any reference to a specific investment or security does not constitute a recommendation to buy, sell, or hold such investment or security, nor an indication that Principal Global Investors or its affiliates has recommended a specific security for any client account. The complete list of all securities recommended by Principal Global Investors for its representative portfolio is available upon written request.

Subject to any contrary provisions of applicable law, Principal Global Investors and its affiliates, and their officers, directors, employees, agents, disclaim any express or implied warranty of reliability or accuracy and any responsibility arising in any way (including by reason of negligence) for errors or omissions in this document or in the information or data provided in this document.

Past performance is no guarantee of future results and should not be relied upon to make an investment decision. Investing involves risk, including possible loss of principal.

All figures shown in this document are in U.S. dollars unless otherwise noted. All assets under management figures shown in this document are gross figures, before fees, transaction costs and other expenses and may include leverage, unless otherwise noted. Assets under management may include model-only assets managed by the firm, where the firm has no control as to whether investment recommendations are accepted, or the firm does not have trading authority over the assets.

Composite performance returns shown are gross returns, unless otherwise stated, and are before fees, transaction costs and other expenses. Actual returns to an investor will be reduced by investment advisory fees and other expenses that may be incurred in the management of an account which will have a material impact on the returns an investor would receive over time. The collection of fees produces a compounding effect on the total rate of return net of management fees. As an example, the effect of investment management fees on the total value of a client's portfolio assuming (a) annual fee assessment, (b) $1,000,000 investment, (c) portfolio return of 8% a year, & (d) 1.00% annual investment advisory fee would be $10,800 in the first year, & cumulative effects of $62,008 over five years & $148,655 over ten years. Additional information regarding the policies for calculating & reporting returns is available upon request. Principal Global Investors advisory fees are disclosed in the firms form ADV, Part 2A.

The two methods of calculating performance of the composite and the index may not be identical and it is not possible to invest in an index. Indices are unmanaged and do not take into account fees, expenses and transaction costs are not available for direct investment.

This document is intended for sophisticated institutional and professional investors only and is delivered on an individual basis to the recipient and should not be passed on, used by any person or entity in any jurisdiction or country where such distribution or use would be contrary to local law or regulation, or otherwise distributed in whole or in part, by the recipient to any other person or organization.

This document is issued in The United States by Principal Global Investors, LLC, which is regulated by the U.S. Securities and Exchange Commission..

Important information

Principal Global Investors leads global asset management at Principal® and includes the asset management operations of the following members of Principal®: Principal Global Investors, LLC; Principal Real Estate Investors, LLC; Principal Real Estate Europe Limited and its affiliates; Spectrum Asset Management, Inc.; Post Advisory Group, LLC; Columbus Circle Investors; Morley Capital Management Inc.; Finisterre Capital, LLP; Origin Asset Management, LLP; Principal Global Investors (Europe) Limited; Principal Global Investors (Singapore) Ltd.; Principal Global Investors (Australia) Ltd.; Principal Global Investors (Japan) Ltd.; Principal Global Investors (Hong Kong) Ltd., and include assets where we provide model portfolios. Marketing assets under management include certain assets that are managed by Principal International and Retirement and Income Solutions divisions of Principal.

Principal Global Investors and its directors or employees advise that they and persons associated with them may have an interest in the securities and/or financial products discussed herein and that they may receive brokerage, commissions, fees and other benefits and advantages, whether pecuniary or not and whether direct or indirect, in connection with such securities and/or products.

LACERS
LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM

Report to Investment Committee

Lita Payne for
From: Neil M. Guglielmo, General Manager

Agenda of: **APRIL 9, 2019**

ITEM: **VI**

SUBJECT: **TACTICAL ASSET ALLOCATION PLAN AND POSSIBLE COMMITTEE ACTION**

Recommendation

That the Committee consider and provide comments regarding the proposed Tactical Asset Allocation Plan.

Discussion

On February 12, 2019, the Board approved revisions to the Investment Policy (Policy) to include Tactical Asset Allocation within the rebalancing section of the Policy (Section I.V.G). Pursuant to the Policy, the Board must approve a Tactical Asset Allocation Plan (TAAP) annually to authorize staff to conduct tactical rebalancing. The proposed TAAP (Attachment A) addresses the goals and objectives of tactical asset allocation, roles and responsibilities of parties involved, decision-making and implementation framework, and reporting requirements.

Strategic Plan Impact Statement
The Tactical Asset Allocation Plan assists the Board in building a diversified portfolio to optimize LACERS' long-term risk-adjusted return profile (Goal IV). Development and adoption of such a plan also promotes good governance practices (Goal V).

This report was prepared by Jimmy Wang, Investment Officer I, Investment Division.

RJ:BF:JW:sg

Attachment: A) Proposed Tactical Asset Allocation Plan

TACTICAL ASSET ALLOCATION PLAN

TABLE OF CONTENTS

I. Purpose and Scope
II. Roles and Responsibilities
III. Terminology
IV. Tactical Asset Allocation Considerations
V. Implementation
VI. Risk Management Guidelines
VII. Annual Review of the TAAP
VIII. Appendix

I. Purpose and Scope

The Tactical Asset Allocation Plan (TAAP) is an addendum to Section I.V.G of the Investment Policy.

On February 12, 2019, the Board of Administration ("Board") of the Los Angeles City Employees' Retirement System (LACERS) approved revisions to the Investment Policy, which included a revision to the Rebalancing Policy (Section I.V.G). Specifically, a provision was provided for Tactical Asset Allocation (TAA). Under the TAA section, staff is authorized to initiate tactical rebalancing pursuant to the Tactical Asset Allocation Plan (TAAP).

The Board believes that LACERS Total Fund (Total Fund) is best managed when additional tools are available for staff to address a dynamic and rapidly changing investment market. Tactical Asset Allocation, pursuant to the Rebalancing Policy and procedures found in the TAAP, is designed to supplement and complement the Rebalancing Policy by adding flexibility to rebalancing decisions within a prudent, decision-making framework based on market and/or internal operational conditions. Rebalancing decisions – strategic and tactical – will be based on the principles of prudence, care, and risk mitigation.

More specifically, the TAAP provides additional approaches to the rebalancing of asset classes within established asset class policy target ranges. Rebalancing under the TAAP must achieve at least one of the following objectives: 1) Enhance Total Fund value; 2) Protect Total Fund value; or 3) Enhance the risk/return profile of the Total Fund pursuant to the Asset Allocation Policy and Risk Budget.

II. Roles and Responsibilities

The Board of Administration

The Board authorizes, provides oversight, and approves amendments to the TAAP. The Board delegates to staff the implementation of TAA within the adopted Rebalancing Policy, Asset Allocation Policy, and Risk Budget. The Board will review and approve the TAAP on or before July 1 of each year.

Investment Committee

The Investment Committee is responsible for the annual performance evaluation of the TAAP and recommends amendments to the Board.

Chief Investment Officer

The Chief Investment Officer (CIO) is responsible for the implementation of a Tactical Asset Allocation rebalancing pursuant to the TAAP. The CIO will review recommendations from staff and the General Fund Consultant to determine if a Tactical Rebalance is appropriate. The CIO is also responsible for unwinding any previously-initiated Tactical Actions as may be necessary. The CIO along with staff is responsible for observing economic and market indicators, assessing internal operational conditions, and working with the General Fund Consultant (and seeking advisement of other Investment Consultants under contract) to seek concurrence with a Tactical Action Proposal. The CIO will apprise the Board within 30 days of initiating a Tactical Rebalance.

General Fund Consultant

The General Fund Consultant reviews the CIO's proposed Tactical Action, and either concurs, amends, or disagrees with the proposed decision within seven business days of presentation of the Tactical Rebalance Proposal.

III. Terminology

Tactical Factors – External landscape observations that include economic, market, and valuation factors plus internal operational factors, all of which are to be considered when developing a Tactical Rebalance Proposal (see Appendix A).

Tactical Objectives – The driving force that underpins justification for a Tactical Rebalance. It may include: 1) Enhance Total Fund value; 2) Protect Total Fund value; or 3) Enhance the Risk/Return Profile of the Total Fund.

Tactical Rebalance Proposal – A written Tactical Rebalance plan to address one specific Tactical Asset Allocation (TAA) Rebalance. The Tactical Rebalance Proposal shall consider the provisions found in TAAP Sections IV, V, VI, and VII.

Tactical Rebalance – One or more individual tactical movements of capital between or among asset classes to achieve one or more Tactical Objectives. A Tactical Rebalance may take one to 12 months to implement; and up to an additional 12 months are provided if a Tactical Reversal is included in a Tactical Rebalance Proposal.

Tactical Action – One specific individual movement of capital that impacts asset holdings due to movements of cash, in-kind asset transfers, or use of derivatives. Derivatives may be used as an alternative to cash or in-kind asset transfers to obtain the equivalent changes in exposure(s), if derivatives are expected to produce more favorable economic and/or risk enhancements. Derivatives may not be used as a form of leverage.

Tactical Reversal – An optional component of a Tactical Rebalance Proposal, a Tactical Reversal is a specific and time bound plan to partially or fully unwind a Tactical Rebalance once economic or market conditions, or internal operations stabilize. A Tactical Reversal is an integral component of a Tactical Rebalance Proposal and may take up to 12 additional months to achieve full implementation.

IV. Tactical Asset Allocation Considerations

LACERS is a long-term strategic investor and implements the Asset Allocation Policy. TAA allows LACERS flexibility to adjust exposures to established asset classes to achieve one of several aforementioned TAA Objectives. TAA Factors that are considered when contemplating a Tactical Rebalance include (but are not restricted to) stage of the economic cycle; abrupt or trending market or capital dislocations; or excessive or deep-under valuations of specific or broad asset types within the Total Fund or in the market.

V. Implementation

Implementation of a Tactical Action will comply with the following procedures:

1. External Landscape Evaluation – Economic market outlook, including economic indicators, monetary and fiscal policies, geo-political events, Federal Reserve Bank actions, interest rates, inflation, etc.
2. Internal Operational Evaluation – Actual asset allocation of the Total Fund compared to policy targets, asset class movements and trends, portfolio valuations, operational cash, future, pending, or existing RFP manager searches and hiring of investment managers, pending investment manager terminations, market and economic landscape commentary or information from investment managers, and compliance with existing Investment Policy
3. General Fund Consultant Discussion and Concurrence (and discussion with other contracted Investment Consultants as it may apply)

4. Written Tactical Rebalance Proposal to include the following decision considerations (as they may apply):
    - External Landscape and Internal Operational Evaluations;
    - Projected Impact on Asset Allocation and Asset Classes;
    - Projected Impact on Total Fund addressing Tactical Objectives:
        - Enhancement to Total Fund Value; and/or
        - Protection of Total Fund Value; and/or
        - Enhanced Risk/Return Profile and Compliance to Risk Budget
    - Projected Quantitative Outcomes including measurable Performance and Risk Metric improvements and Capital Preservation amounts;
    - Financial Considerations - Dollars directly impacted by a Tactical Rebalance; Proposed Implementation Timing and Transactional Costs; Benchmark to evaluate performance; Monitoring Schedule
    - Tactical Reversal (Partial or Full) as needed
5. Implementation of Tactical Action pursuant to the written Tactical Rebalance Proposal and TAAP Risk Management Guidelines.
6. Report to the Board within 30 days of initiating a Tactical Rebalance
7. Quarterly Status Reporting of Tactical Rebalancing implementation
8. Internal Monthly Rebalancing and Compliance Staff Reviews per the Rebalancing Policy (Section I.V.G), attached as Appendix B
9. Annual Investment Committee Review of TAAP based on Staff Report
10. Annual Board Renewal of TAAP based on Investment Committee Report

VI. Risk Management Guidelines

The following guidelines are designed to help the CIO manage the implementation of the TAA Policy within a prudent risk-management framework.

1. A Tactical Rebalance may be initiated when the actual weighting of an asset class exceeds 70% of the range from its target weighting to its established bands.
2. A Tactical Rebalance Proposal shall not exceed 50% of the excess over or under weight to its policy target at the time the decision to rebalance is made.
3. A Tactical Rebalance shall be completed within 12 months of initiation; except in the case of a partial or full reversal of the original Tactical Rebalance, which may extend the Tactical Rebalance up to an additional 12 months.
4. A Tactical Action shall not exceed 50% of the value between an asset class upper or lower actual value (at the time of initiating a Tactical Rebalance) and its current policy target; subsequent Tactical Actions within a specific Tactical Rebalance shall be based on the original policy target valuations and actual valuations at the time the first Tactical Action is deployed.
5. Each Tactical Action within a Tactical Rebalance shall be separated by no less than 30 calendar days but not more than 120 calendar days.
6. A Tactical Rebalance may be suspended after the first Tactical Action is completed if such single Tactical Action or subsequent prescribed Tactical Actions achieves the Tactical Objective(s), thus requiring no further Tactical Action(s) pursuant to a Tactical Rebalancing Proposal.

7. No more than one Tactical Rebalance may be actively deployed and in progress within the Total LACERS Fund without prior Board approval.
8. A Tactical Rebalance Proposal may be modified (including suspension) by the CIO with the concurrence of the General Fund Consultant if market conditions or other external landscape factors change or strategic asset class rebalances are necessary that disrupts the orderly implementation of the Tactical Rebalance Proposal, or internal operations such as liquidity needs creates a material impact on the Tactical Rebalance Proposal such that the Tactical Objectives are no longer achievable within the established Tactical Rebalance Proposal timeframe due to material changes in the original market assumptions, operational factors, or risk levels.
9. The General Fund Consultant must concur with the Tactical Rebalance Proposal prior to initiation.

VII. Annual Review of the TAAP

Annual TAAP Review by the Investment Committee

Staff shall prepare a report of all Tactical Rebalance Proposals that were initiated in the current fiscal year, the current status of Tactical Rebalances and Tactical Actions, and the projected and actual impact of the Tactical Rebalance(s) including (but not restricted to) performance, capital preservation, and/or risk factors. Staff may also include recommendations to modify, continue or cease the TAAP. The Annual TAAP Review will be presented to the Investment Committee not later than the month of April of each year.

The Investment Committee will determine if the TAAP meets the goals of the Rebalancing Policy and if the TAAP requires any modifications. The Investment Committee recommendations will be then sent to the Board of Administration for approval.

Annual TAAP Approval or Repeal by the Board of Administration
The Board of Administration shall review and approve, modify, or repeal the TAAP prior to the beginning of each Fiscal Year.

If the TAAP is repealed, staff may not enter any new Tactical Rebalances; except Tactical Reversals that were contemplated in the Tactical Rebalance Proposal may be implemented according to the implementation sequence of the Tactical Actions.

VIII. APPENDIX

APPENDIX A
External Landscape and Internal Operational Considerations

I. *Economic Cycle Consideration* - A Tactical Action may be appropriate based on the economic cycle, as illustrated below:

Early Stage Phase - The early stage of the economic cycle is characterized by recovering growth in the gross domestic product (GDP), profit margins, and consumer confidence. Credit and inflation in the economy are typically flat while interest rates start to rise. Stocks tend to be trading at more attractive levels compared to longer term historical averages.

Early to Mid-Cycle Stage Phase - During the early and mid-cycle phases, equities have the potential to outperform. TAA may attempt to take advantage of expansion stages by shifting exposure to public equities and reducing exposures to core fixed income assets.

Later and Recession Stage Phases - During late and recession stages, equities have potential to underperform risk-off assets. TAA may attempt to protect the Total Fund by reducing public equities and increasing fixed income assets.

II. *Market Stages Consideration*

The economy oscillates between stages of expansion (early and middle stages) and contraction (late and recession stages). The early stage of the economic cycle is characterized by recovering growth in the gross domestic product (GDP), profit margins, and consumer confidence. Credit and inflation in the economy are typically flat while interest rates start to rise. Stocks tend to be trading at more attractive levels compared to longer term historical averages.

During the mid-cycle period of the economic cycle, the economy generally experiences expansion in GDP, credit growth, profit margins, and consumer confidence. Interest rates and inflation are typically stable during this period. Stocks tend to recover to levels in-line with long term average valuations.

In the late-cycle period of the economic cycle, the economy typically experiences moderation in GDP growth, profit margins, and credit expansion. Consumer confidence is high and both interest rates and inflation are on the rise. Stocks trade at the higher band of long term averages while volatility tends to be higher than the earlier parts of the cycle.

Finally, during the recession stage of the economic cycle, excesses are purged from the system. GDP, credit, profit margins, interest rates, inflation and consumer confidence are all falling. During this phase of the market, volatility in the stock market increases dramatically while prices tend to fall to below average valuations.

III. *Assessment of Market Conditions*

Staff will evaluate and assess if the market is Early-Cycle, Mid-Cycle, Late-Cycle or in a Recession.

This assessment will be based on the factors listed in the chart below.

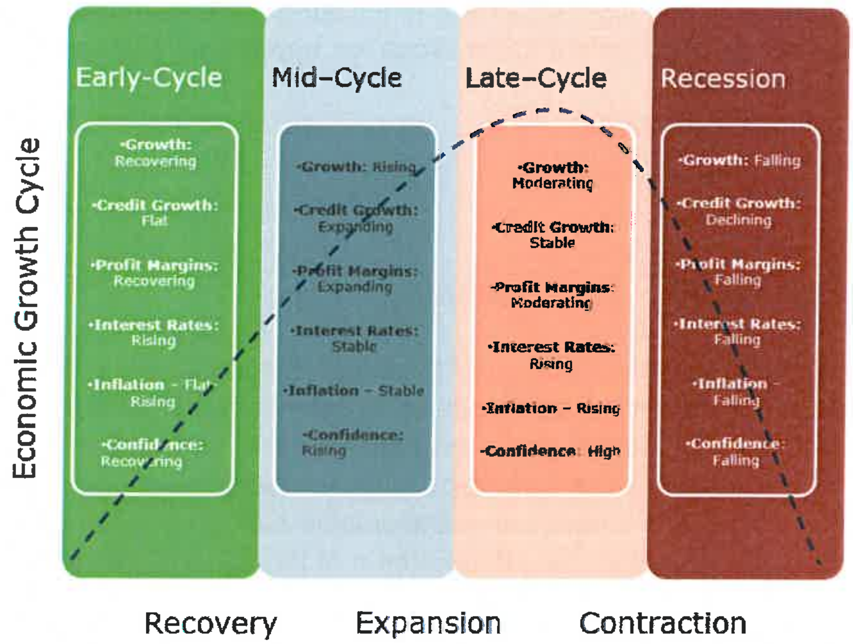


*chart provided by NEPC, LLC

IV. *Economic and Market Risk Assessment*

Staff will address one or more of the economic, financial, and market indicators.

- Growth: Year-over-year growth in GDP
- Credit Growth: Year-over-year growth in total credit
- Profit Margins: Corporate profit margins
- Interest Rates: Short, Long, Yield Curve
- Inflation: Consumer Price Index
- Confidence Levels: Consumer Sentiment Index
- Additional factors such as commodity and currency trends, unemployment statistics, building permits, sales, and manufacturing statistics.

V. *Asset Valuations*

Staff will address the relevant market valuation indicators to include (but not restricted to):

- Current to Long-Term Historical Valuations reflected in Price to Earnings, Price to Book, and Dividend Yields
- Interest rate spreads, duration
- Growth versus Value

VI. *Internal Operational Considerations*

Staff will evaluate factors to include (but not restricted to):

- Benefits and Consequences of initiating a Tactical Action versus strategic rebalancing against asset allocation upper and lower policy target thresholds
- Liquidity Impact

APPENDIX B
Investment Policy, Section I.V.G. Rebalancing

The investment portfolio shall, on an ongoing basis in accordance with market fluctuations, be rebalanced to remain within the range of targeted allocations and distributions among investment advisors. The Board has a long-term investment horizon and utilizes an asset allocation that encompasses a strategic, long-run perspective of capital markets. It is recognized that a strategic long-run asset allocation plan implemented in a consistent and disciplined manner will be the major determinant of the System's investment performance.

Rebalancing is not primarily intended to be used for tactical asset allocation. The Board will not attempt to time the rise or fall of the investment markets by moving away from long-term targets because (1) market timing may result in lower returns than buy-and-hold strategies; (2) there is little or no evidence that one can consistently and accurately predict market timing opportunities; and (3) rebalancing too often may result in excessive transaction costs. However, the Board may authorize staff to rebalance assets within or among asset classes without breaching Board-established asset allocation policy threshold bands. Such rebalancing would be subject to an annually approved Tactical Asset Allocation Plan (TAAP) in order to enhance incremental performance during periods of market dislocations. The Board will consider the approval of a new TAAP or renewal of an existing TAAP within three months prior to the start of each fiscal year. The approved TAAP will be effective on July 1 of each year. Should the Board choose not to renew a TAAP, the existing TAAP may continue to be implemented; however, new TAA positions may not be introduced until a new TAAP is approved by the Board.

The Board delegates the responsibility of rebalancing to the Chief Investment Officer, who will seek the concurrence of the General Fund Consultant. Rebalancing generally will occur when the market values of asset classes (e.g., equities, fixed income, etc.) or sub-asset classes (e.g., large cap value, emerging markets, etc.) exceed their respective thresholds as established by the Board's approved asset allocation and asset class risk budgets.

The portfolio will be monitored daily, but reviewed by senior investment staff (i.e., Chief Investment Officer or Chief Operating Officer) at the beginning of each month to determine the need to rebalance asset classes or sub-asset classes within approved policy bands. Rebalancing will be conducted in a timely manner, taking into consideration associated costs and operational circumstances and market conditions. Rebalancing will be accomplished by using routine cash flows, such as contributions and benefit payments, by reallocating assets across asset classes, investment mandates, and investment managers.

Asset classes temporarily may remain outside of their ranges due to operational and implementation circumstances to include, but not limited to, illiquidity that prevents immediate rebalancing of certain asset classes such as private equity and private real estate; potential asset shifts pending in the portfolio over the next 12 months such as hiring/termination of a manager(s); an asset allocation review of the entire portfolio; or a structural review of a given asset class.

The Chief Investment Officer shall inform the Board in a timely manner of all rebalancing activity.