AGENDA

Date: February 2, 2018

The regular meeting of the Dallas Police and Fire Pension System Board of Trustees will be held at **1:00 p.m. on Thursday, February 8, 2018, in the Second Floor Board Room at 4100 Harry Hines Boulevard, Dallas, Texas**. Items of the following agenda will be presented to the Board:

A. MOMENT OF SILENCE

B. CONSENT AGENDA

1. **Approval of Minutes**

   Regular meeting of January 11, 2018

2. **Approval of Refunds of Contributions for the Month of January 2018**

3. **Approval of Activity in the Deferred Retirement Option Plan (DROP) for February 2018**

4. **Approval of Estate Settlements**

5. **Approval of Survivor Benefits**

6. **Approval of Service Retirements**

7. **Approval of Alternate Payee Benefits**

8. **Approval of Payment of DROP Revocation Contributions**

9. **Spouse Wed After Retirement (SWAR)**

C. DISCUSSION AND POSSIBLE ACTION REGARDING ITEMS FOR INDIVIDUAL CONSIDERATION

1. **AEW Capital Management portfolio review**

   Portions of the discussion under this topic may be closed to the public under the terms of Section 551.072 of the Texas Government Code.

2. **Real estate portfolio briefing**

   Portions of the discussion under this topic may be closed to the public under the terms of Section 551.072 of the Texas Government Code.

3. **Illiquid assets and asset allocation considerations**

   Portions of the discussion under this topic may be closed to the public under the terms of Section 551.072 of the Texas Government Code.

4. **Fiduciary liability insurance**

5. **Board of Trustees Governance and Conduct Policy**

6. **Status of RFP for Investment Consultant**

7. **Chief Investment Officer**

   Portions of the discussion under this topic may be closed to the public under the terms of Section 551.074 of the Texas Government Code.

8. **Legal issues**

   Portions of the discussion under this topic may be closed to the public under the terms of Section 551.071 of the Texas Government Code.

   a. DPFP v. The Townsend Group and Gary Lawson
   b. Rawlings v. DPFP

9. **Board approval of Trustee education and travel**

   a. Future Education and Business-related Travel
   b. Future Investment-related Travel

10. Unforeseeable Emergency Requests from DROP Members

Portions of the discussion under this topic may be closed to the public under the terms of Section 551.078 of the Texas Government Code.

D. BRIEFING ITEMS

1. Reports and concerns of active members and pensioners of the Dallas Police and Fire Pension System

2. Executive Director's report

a. Associations' newsletters
- NCPERS Monitor (January 2018)
- NCPERS PERSist (Winter 2018)

b. Employee recognition – Fourth Quarter 2017
- Employee Service Award
- Employee of the Quarter award
- Employee of the Year

c. DROP revocation

d. USERRA

e. Chief Financial Officer

The term "possible action" in the wording of any Agenda item contained herein serves as notice that the Board may, as permitted by the Texas Government Code, Section 551, in its discretion, dispose of any item by any action in the following non-exclusive list: approval, disapproval, deferral, table, take no action, and receive and file. At the discretion of the Board, items on this agenda may be considered at times other than in the order indicated in this agenda.

At any point during the consideration of the above items, the Board may go into Closed Executive Session as per Texas Government Code, Section 551.071 for consultation with attorneys, Section 551.072 for real estate matters, Section 551.074 for personnel matters, and Section 551.078 for review of medical records.

DALLAS POLICE & FIRE PENSION SYSTEM

ITEM #A

MOMENT OF SILENCE

In memory of our Members and Pensioners who recently passed away

(January 5, 2018 – January 27, 2018)

NAME	ACTIVE/ RETIRED	DEPARTMENT	DATE OF DEATH
Howard L. Morgan	Retired	Fire	Jan. 5, 2018
Billy L. Stroud	Retired	Police	Jan. 5, 2018
J. F. Salter	Retired	Fire	Jan. 6, 2018
Gregory D. Epley	Retired	Police	Jan. 9, 2018
B. D. McCarley	Retired	Fire	Jan. 11, 2018
Milton O. Johns	Retired	Police	Jan. 13, 2018
James C. Young	Retired	Fire	Jan. 13, 2018
Virgil E. Wall	Retired	Fire	Jan. 14, 2018
H. H. Stockton	Retired	Fire	Jan. 16, 2018
Steven R. Brown	Active	Police	Jan. 18, 2018
Thomas A. Hutson	Retired	Police	Jan. 26, 2018
Charles H. Wesson	Retired	Police	Jan. 27, 2018

Dallas Police and Fire Pension System
Thursday, January 11, 2018
1:00 p.m.
4100 Harry Hines Blvd., Suite 100
Second Floor Board Room
Dallas, TX

Regular meeting, Nicholas A. Merrick, Vice-Chairman, presiding:

ROLL CALL

Board Members

Present at 1:01 p.m.	Nicholas A. Merrick, Samuel L. Friar, Blaine Dickens, Frederick E. Rowe, Tina Hernandez Patterson, Robert C. Walters (by telephone), Joseph P. Schutz, Kneeland Youngblood
Absent:	Gilbert A. Garcia, Ray Nixon, William F. Quinn
Staff	Kelly Gottschalk, Josh Mond, John Holt, Damion Hervey, Cynthia J. Thomas, Ryan Wagner, Milissa Romero, Greg Irlbeck, Linda Rickley
Others	Chuck Campbell (by telephone), Michael Yang (by telephone), David Elliston, Janis Elliston, Lloyd D. Brown, Kenneth Sprecher, Pat Lewter, Rick Salinas, Andy Acord, James Freeman, Carolyn Freeman, Brian Hass, A. D. Donald, Zaman Hemani

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The meeting was called to order at 1:01 p.m.

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A. MOMENT OF SILENCE

The Board observed a moment of silence in memory of retired police officers Michael F. Edmonds, Thomas H. Covington, Donald M. Parton, W. J. Prestenberg, James C. Wallace, Jack L. Davis, and retired firefighters J. N. Liebrum, G. E. Renfroe, Freddie L. Turner, James M. Johnson.

No motion was made.

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B. CONSENT AGENDA

1. Approval of Minutes

Regular meeting of December 14, 2017

2. Approval of Refunds of Contributions for the Month of December 2017

3. Approval of Activity in the Deferred Retirement Option Plan (DROP) for January 2018

4. Approval of Estate Settlements

5. Approval of Survivor Benefits

6. Approval of Service Retirements

7. Approval of Payment of Military Leave Contributions

8. Approval of Payment of DROP Revocation Contributions

9. Denial of Unforeseen Emergency Requests

After discussion, Mr. Youngblood made a motion to approve the minutes of the meeting of December 14, 2017. Mr. Friar seconded the motion, which was unanimously approved by the Board.

After discussion, Mr. Youngblood made a motion to approve the remaining items on the Consent Agenda, subject to the final approval of the staff. Mr. Friar seconded the motion, which was unanimously approved by the Board.

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C. DISCUSSION AND POSSIBLE ACTION REGARDING ITEMS FOR INDIVIDUAL CONSIDERATION

1. Lone Star Investment Advisors

Staff explained that two funds managed by Lone Star Investment Advisors have subscription lines of credit coming due which may require capital contributions by DPFP to the funds. The staff briefed the Board on DPFP's options, with Michael Yang, Research Consultant, NEPC, participating by telephone.

1. Lone Star Investment Advisors (continued)

After discussion, Mr. Youngblood made a motion that staff would request that the general partner of two funds managed by Lone Star Investment Advisors not extend the funds' subscription lines of credit, granting discretion to staff to negotiate and report back to the Board before agreeing to any proposal to extend the terms either of the funds or the funds' subscription lines of credit. Ms. Hernandez Patterson seconded the motion, which was unanimously approved by the Board.

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Mr. Walters left the meeting at 1:33 p.m.

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2. Board of Trustees and Employees Ethics and Code of Conduct Policy

The staff discussed possible changes to the policy to address situations where Trustees have pre-existing relationships with third parties who either do business or desire to do business with DPFP.

After discussion, Mr. Youngblood made a motion to approve the proposed revised Board of Trustees and Employees Ethics and Code of Conduct policy. Ms. Hernandez Patterson seconded the motion, which was unanimously approved by the Board. Mr. Walters was not present for this item.

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3. Requirement for Two Annual Public Meetings

Ms. Gottschalk discussed with the Board Section 3.01(j-9) of Article 6243a-1, which states "At least twice each year, the board shall have a meeting to receive public input regarding the pension system and to inform the public about the health and performance of the pension system…."

After discussion, the Board directed staff to hold the two annual public meetings which are required by HB 3158 following the Regular and Supplemental Board meetings in the months of May 2018 and September 2018. Mr. Walters was not present for this item.

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4. Trustee Education Requirements

Ms. Gottschalk discussed Trustee education and training requirements under the Texas Government Code and HB 3158. Mr. Walters was not present for this item.

No motion was made.

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5. Education and Travel Policy and Procedure

The staff and Board discussed proposed revisions to the Education and Travel Policy and Procedure.

After discussion, Mr. Youngblood made a motion to approve the proposed revised Education and Travel Policy and Procedure. Mr. Schutz seconded the motion, which was unanimously approved by the Board. Mr. Walters was not present for this item.

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6. Board approval of Trustee education and travel

a. Future Education and Business-related Travel
b. Future Investment-related Travel

The Board and staff discussed approval of future education and business-related travel. There was no future investment-related travel.

After discussion, Mr. Youngblood made a motion to approve Mr. Dickens' requested online education. Ms. Hernandez Patterson seconded the motion, which was unanimously approved by the Board. Mr. Walters was not present for this item.

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7. Legal issues

a. DPFP v. The Townsend Group and Gary Lawson
b. Rawlings v. DPFP

No discussion was held and no motion was made regarding legal issues.

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8. Unforeseeable Emergency Requests from DROP Members

No discussion was held regarding Unforeseeable Emergency Requests from DROP members.

No motion was made.

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9. Board agenda materials

Staff briefed the Board on the status of implementation of a new method for delivering to the Board agenda materials as well as other DPFP information. Mr. Walters was not present for this item.

No motion was made.

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10. DROP Revocation – Interest Assessed on Unpaid Contributions in Connection with Service Purchase

At the request of Mr. Dickens, the Board discussed DROP revocation interest assessed on unpaid contributions in connection with service purchase.

After discussion, Mr. Dickens made a motion not to charge interest on unpaid contributions in connection with service purchase. Ms. Hernandez Patterson seconded the motion. The votes were as follows:
For: Dickens, Hernandez Patterson, Friar, Schutz
Against: Merrick, Rowe, Youngblood
Mr. Walters was not present for this item.

The motion failed due to the requirement to have six votes in favor of the motion.

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D. BRIEFING ITEMS

1. Reports and concerns of active members and pensioners of the Dallas Police and Fire Pension System

No active member or pensioner requested to address the Board with concerns.

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2. Executive Director’s report

Employee recognition – Fourth Quarter 2017

- Employee Service Award
- Employee of the Quarter award
- Employee of the Year

No report was given. No motion was made.

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Ms. Gottschalk stated that there was no further business to come before the Board. On a motion by Mr. Youngblood and a second by Mr. Schutz, the meeting was adjourned at 2:36 p.m.

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Nicholas A. Merrick
Vice-Chairman

ATTEST:

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Kelly Gottschalk
Secretary

Detailed Consent Agenda
Regular Meeting, February 8, 2018

CONSENT AGENDA

1. **Approval of Minutes** *(See separate attachment for minutes)*

2. **Approval of Refunds of Contributions for the Month of January 2018**

Refund of Combined Pension Plan, Section 6.02 Group B Contributions

EMPLOYEE NAME	DEPT.	REFUND DATE
Will A. Boedeker	Fire	Jan. 12, 2018
Evan R. Hummel	Fire	Jan. 12, 2018
Ignacio R. Sanchez	Fire	Jan. 26, 2018
Jesse E. Bakos	Police	Jan. 12, 2018
Karen M. Eguia	Police	Jan. 12, 2018
John P. Eubanks	Police	Jan. 12, 2018
Sarah M. Martinez	Police	Jan. 12, 2018
Leon E. Rademacher, III	Police	Jan. 26, 2018

3. **Approval of Activity in the Deferred Retirement Option Plan (DROP) for February 2018**

New DROP Participants

EMPLOYEE NAME	DEPT.
Robert A. Janick	Fire
Armando Rodriguez	Fire

4. **Approval of Estate Settlements**

Deceased ***(Member (M), Pensioner (P), or Survivor (S))***	Dept.	Date of Death	Estate Payment To
Charlie N. Boyd (P)	Fire	Jul. 16, 2017	Linda M. Thompson
Shayne D. Mitchell (S)	Fire	Nov. 14, 2017	Casey G. Mitchell & Britton L. Mitchell
Maurine Pollard (S)	Fire	Dec. 8, 2017	David L. Pollard & Judy P. Drewry

5. Approval of Survivor Benefits

Deceased *(Member (M), Pensioner (P))*	Dept.	Date of Death	Qualified Survivor	Estate Payment
G. E. Renfroe (P)	Fire	Dec. 13, 2017	Rosalee Renfroe	Y
Freddie L. Turner (P)	Fire	Dec. 19, 2017	Mary L. Turner	Y
Thomas H. Covington (P)	Police	Dec. 14, 2017	Jane C. Covington	Y
Michael F. Edmonds (P)	Police	Dec. 10, 2017	Elizabeth A. Edmonds	Y
Donald M. Parton (P)	Police	Dec. 16, 2017	Renee A. Parton	Y
William J. Prestenberg (P)	Police	Dec. 26, 2017	Patsy Prestenberg	N

6. Approval of Service Retirements

Member	Dept.	Effective
Gregory L. Arterberry	Fire	Jan. 24, 2018
Rene Blakely	Fire	Jan. 24, 2018
Joe R. Brown	Fire	Jan. 24, 2018
Tommy L. Crawford	Fire	Jan. 6, 2018
Clayton J. King	Fire	Feb. 7, 2018
Michael W. Price	Fire	Jan. 24, 2018
Howard R. Russell	Fire	Jan. 24, 2018
David B. Williams	Fire	Jan. 24, 2018
David L. Burnham	Police	Jan. 31, 2018
Gary L. Collins	Police	Feb. 7, 2018
Jarrett J. Ehlinger	Police	Feb. 1, 2018
George A. Gonzales	Police	Feb. 1, 2018
Danneil T. Johnson	Police	Jan. 24, 2018
Eric S. Keller	Police	Jan. 24, 2018
Thomas W. Lawrence, Jr.	Police	Feb. 7, 2018
Tri X. Ngo	Police	Feb. 7, 2018

7. Approval of Alternate Payee Benefits

Alternate Payee	Member	Dept.
Mary K. Elliot	Phillip B. Elliot	Police

8. Approval of Payment of DROP Revocation Contributions

Name	Dept.
William K. Barrow	Fire
Robert W. Brey	Fire
Robin Gerdes	Fire
Shelly G. Henderson	Fire
Robert A. Janick	Fire
Robert F. Johnson	Fire

8. Approval of Payment of DROP Revocation Contributions (continued)

Name	Dept.
Andrew July	Fire
Robert L. Myers	Fire
Gregg A. Oliphant	Fire
Jay T. Prigmore	Fire
Armando Rodriguez	Fire
Karen A. Simon	Fire
Lawrence D. Allen	Police
Steven J. Armon	Police
Stephen B. Baker	Police
Darryl Barclay	Police
David L. Beideck	Police
Robert P. Bernal	Police
James A. Bordelon	Police
Tommy A. Brooks	Police
Olivia C. Brown	Police
Connell Butler	Police
P.P. Campopiano	Police
David A. Campbell	Police
Ronald J. Carroll	Police
Watt J. Carroll	Police
Edna D. Carson	Police
Doreen D. Sotelo-Celedon	Police
Jose M. Cerda	Police
Clarence E. Chapman	Police
Alfreda M. Coffey	Police
Tonya L. Coleman	Police
Gary L. Collins	Police
Johnny F. Crook	Police
Michael B. Dana	Police
Larry C. Davis	Police
Paul A. Demaagd	Police
Tina Duncan	Police
Richard P. Dukes	Police
Anthony B. Edmond	Police
Robin Eisenberg	Police
Stanley F. Forney	Police
David R. Frykholm	Police
Carlos Guzman	Police
Robert S. Hart	Police
Emilio F. Henry	Police
Archie L. Hilburn	Police

8. Approval of Payment of DROP Revocation Contributions (continued)

Name	Dept.
Steve L. Hough	Police
Timothy R. Houston	Police
Blaine J. Hultquist	Police
Michael T. Igo	Police
Joseph T. LaFleur	Police
Mary I. Lavender	Police
Jacqueline E. Lee	Police
Marcus J. Markulec	Police
Thomas J. McGrath	Police
Marshall McLemore	Police
T. F. McPherson	Police
Bonita Morgan	Police
Jacqueline C. Moore	Police
Robert Munoz	Police
Philip C. Musgrove	Police
Patrick G. Oelke	Police
Guadalupe Ortega	Police
James E. Petty	Police
Leroy L. Quigg	Police
Robert A. Ridley	Police
Orlando Robinson	Police
Jeffrey P. Rosso	Police
Albert Ruff	Police
Guy K. Schwarz	Police
Agustin J. Serratos	Police
Cindy L. Smith	Police
Robert D. Starr	Police
Curtis A. Steger	Police
Kenneth R. Strauss	Police
Debora A. Taylor	Police
Gary L. Tittle	Police
Charles L. Tubbs	Police
Brian K. Verdine	Police
Mark A. Vernon	Police
Desiree A. Webb	Police
Vincent A. Weddington	Police

9. Spouse Wed After Retirement (SWAR)

Name	Dept.	Election Date
Arthur P. Richardson	Fire	Mar. 1, 2018

DISCUSSION SHEET

ITEM #C1

Topic: **AEW Capital Management portfolio review**

Portions of the discussion under this topic may be closed to the public under the terms of Section 551.072 of the Texas Government Code.

Attendees:
Ron Pastore, Senior Portfolio Manager
Mark Morrison, Assistant Portfolio Manager
Robin McElligott, Portfolio Controller

Discussion: AEW will update the Board on the status and plans for DPFP's investments in RED Consolidated Holdings ("RCH") and Camel Square, an office development in Phoenix. AEW took over management of these investments in February of 2015. AEW last presented a portfolio review to the Board in April 2017.

AEW

DALLAS POLICE AND FIRE PENSION SYSTEM

BOARD PRESENTATION
February 8, 2018

aew.com

OVERVIEW OF AEW'S ROLE

- Hired on March 1, 2015 by Dallas Police and Fire Pension System ("DPFP") as strategic advisor and successor investment manager for three of DPFP's real estate and private equity investments. The three investments include:
  - **RED Consolidated Holdings** ("RCH"), a 50/50 operating company joint venture with RED Development ("RED"), a Phoenix-based retail and mixed-use development, management and leasing firm with owned and/or managed assets located throughout the southwest and midwest;
  - **Camel Square**, a 100% fee ownership interest in a 290,000-square-foot suburban office complex located on the corner of Camelback and 44th Street in Phoenix, Arizona that is slated for redevelopment into a mixed-used property that could feature a combination of residential, office, hotel, or restaurant uses; and
  - **Creative Attractions** ("CA"), a 45% private equity investment in a restaurant development and operating company that opened the 14,000-square-foot Boathouse Restaurant in the Disney Springs development in Orlando, Florida in April 2015. DPFP exited the CA investment upon the successful sale of the Boathouse Restaurant in May 2017.
- AEW is the strategic oversight manager on DPFP's operating company investment in RCH, with RED serving as asset manager, and AEW holding three of six seats on the RCH Management Committee
  - AEW directly asset manages Camel Square and has retained RED on a consulting basis for the rezoning effort.
- AEW's role is to clarify and meet DPFP's goals and objectives while providing transparency in its strategic oversight of the investments, including:
  - maximizing proceeds from sales, refinancing(s), and development projects while reducing the portfolio's overall risk profile and DPFP liabilities with a significant downsizing of DPFP's position in RCH over a 3-5 year period.
  - developing a recapitalization strategy for DPFP's 50% ownership in the RCH operating platform, with special emphasis on reducing DPFP company level guarantees.
  - Identifying and implementing key corporate-level process and policy changes at RCH, specifically to establish institutional quality "best practices" to improve governance, balance sheet management, operational efficiency and profitability to position the company for recapitalization at the highest possible value.

PORTFOLIO OVERVIEW

The DFP/AEW managed portfolio includes the following investments:

- **RED Consolidated Holdings, LLC ("RCH") -** a 50% joint venture with RED Development ("RED"), a Phoenix-based retail and mixed-use real estate development, leasing and management firm including interests in 23 retail centers, a mixed-use complex in downtown Phoenix, 4 retail developments that are in final lease-up, The Union mixed-use complex in Uptown Dallas, outparcels held for sale, and land in Colorado.
  - After completing successful one off joint ventures during the early 2000's with RED, DPFP elected to enter into a programmatic joint venture with RED to develop additional retail centers in 2008. In 2011, DPFP invested in the RCH operating platform (a 50/50 joint venture) to better align interests with both parties jointly owning projects and sharing in fees generated from the company, including incentive fees. Growing the company and positioning it for a future IPO or sale was the identified exit strategy.
- **Camel Square-** a wholly-owned 290,000 square foot suburban office complex on a 15.5 acre site on the corner of 44th Street and Camelback Road in Phoenix, Arizona. The asset is 50% leased to short term tenants as AEW gets the property entitled and rezoned to maximize its potential as a mixed use development.
  - DPFP made its initial investment in Camel Square in 2000.
  - The prior advisor consciously signed short term leases at the property and minimized capital investments (other than life safety and code requirements) to position the complex for future redevelopment.
  - Prior to AEW's involvement, the prior advisor negotiated a letter of intent with RED for an outright sale of Camel Square, subject primarily to the successful completion of an acceptable rezoning of the site by RED. AEW suspended those discussions and retained RED on a fee basis to rezone the site and solicit interest from key local residential, hotel, restaurant and office users.

PORTFOLIO OVERVIEW (CONTINUED)

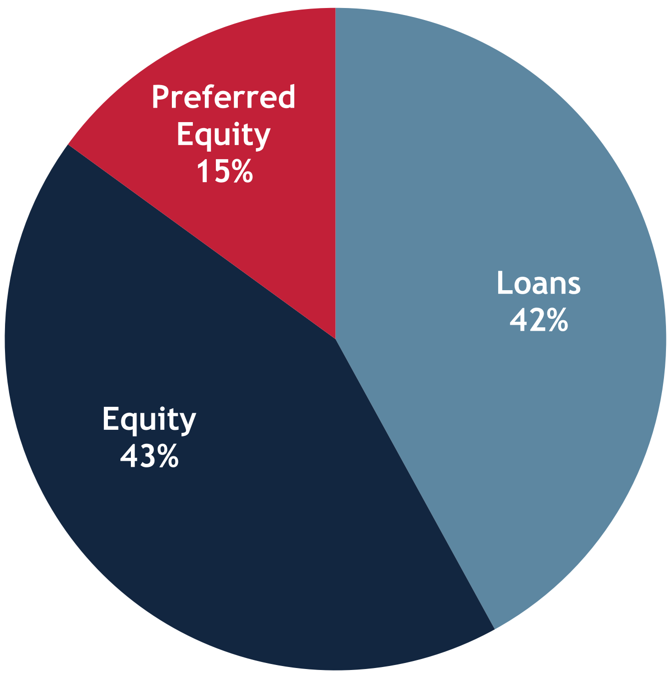
- **Creative Attractions("CA") -** Classified as a Private Equity investment, DPFP held a 45% equity and debt interest in a theme restaurant development and management company that owned the 18,000 SF Boathouse Restaurant in Disney Springs/ Orlando, licensed a concept to another small food venue, and held the franchise rights to a future Disney Boathouse restaurant in Shanghai China.

  - DPFP made its initial investment in 2007 in a joint venture with the company principal (CEO) and RED to develop, own, and operate unique themed restaurant and entertainment concepts.
  - The ventures' first concept restaurant, Backfire Grill at Legends Kansas City, failed, and CA's concept development activities were effectively curtailed by the recession for several years.
  - DPFP exited the potential Shanghai venture, unwound the EB5 financing effort associated with the Orlando Boathouse restaurant and completed its exit from CA by selling the Boathouse Orlando in May 2017.

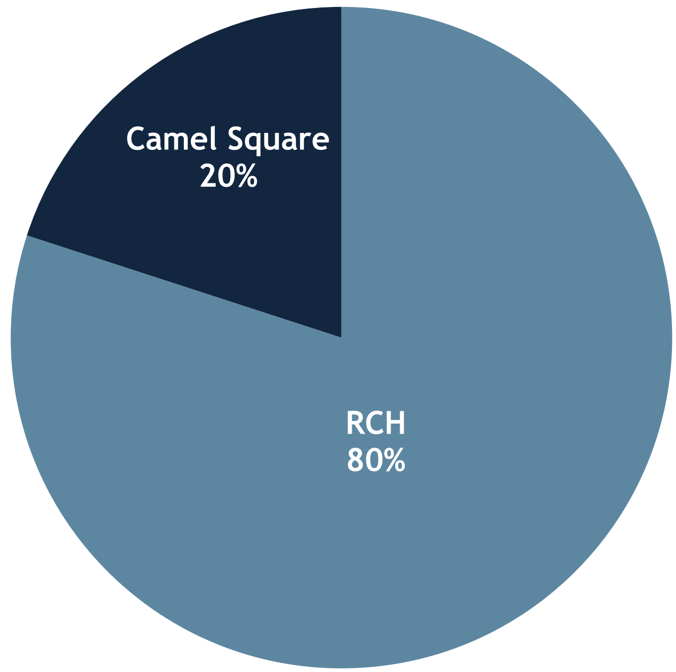
PORTFOLIO OVERVIEW (CONTINUED)

Total DPFP Net Investment Value

BY INVESTMENT TYPE
as of 9/30/17



BY HOLDING
as of 9/30/17



DISCUSSION SHEET

ITEM #C2

Topic: **Real estate portfolio briefing**

Portions of the discussion under this topic may be closed to the public under the terms of Section 551.072 of the Texas Government Code.

Discussion: Staff will discuss the current composition of the real estate portfolio, including a review and strategy for each real estate asset.

DALLAS POLICE & FIRE PENSION SYSTEM

DISCUSSION SHEET

ITEM #C3

Topic: **Illiquid assets and asset allocation considerations**

Portions of the discussion under this topic may be closed to the public under the terms of Section 551.072 of the Texas Government Code.

Attendees: Chris Levell, Partner - NEPC
Mark Cintolo, Senior Consultant - NEPC
Rhett Humphreys, Partner - NEPC

Discussion: Staff will provide an overview of projected cash flow pacing and specific return assumptions for DPFP's illiquid assets, including outlining the expected time frame to reduce DPFP's exposure to illiquid assets. Staff will also discuss how the composition of the illiquid asset portfolio should be considered in assessing changes to asset allocation targets.

NEPC will discuss their asset allocation framework and possible scenarios for DPFP to transition its illiquid assets into target asset allocation mixes.

DALLAS POLICE & FIRE PENSION SYSTEM

Illiquid Assets and Asset Allocation Considerations

February 8, 2018

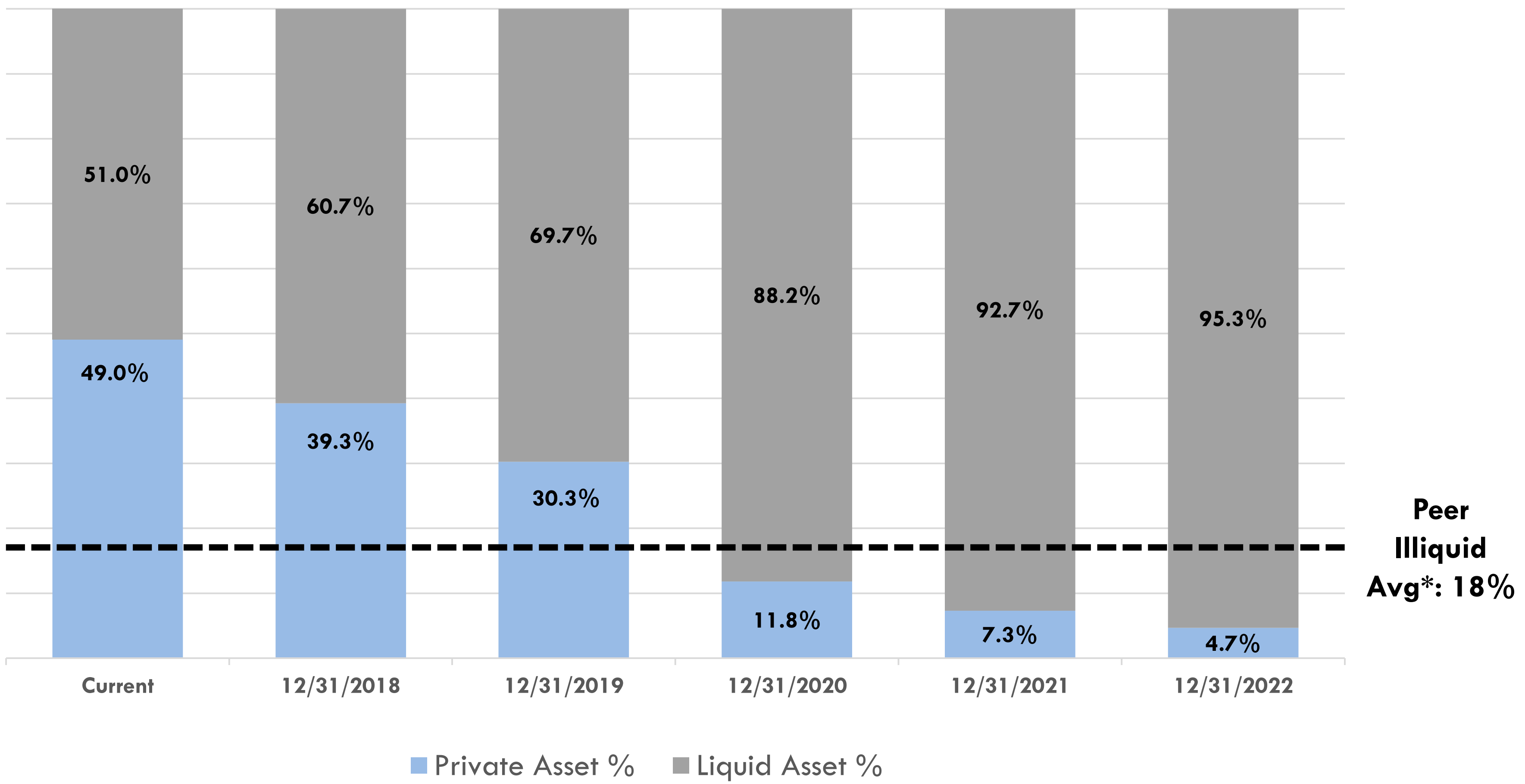
Asset Allocation – Key Considerations for DPFP Portfolio

- How long will it take to transition our portfolio to the allocation the Board ultimately adopts?
- What should the ***return & risk*** expectations be on specific illiquid assets?
- Develop a plan to transition into liquid asset classes as illiquid assets are sold.

Net Benefit Outflows: expected to average approximately $120m per year or $10m per month over next 5 years

Illiquid Asset – 5 year forward cash projections

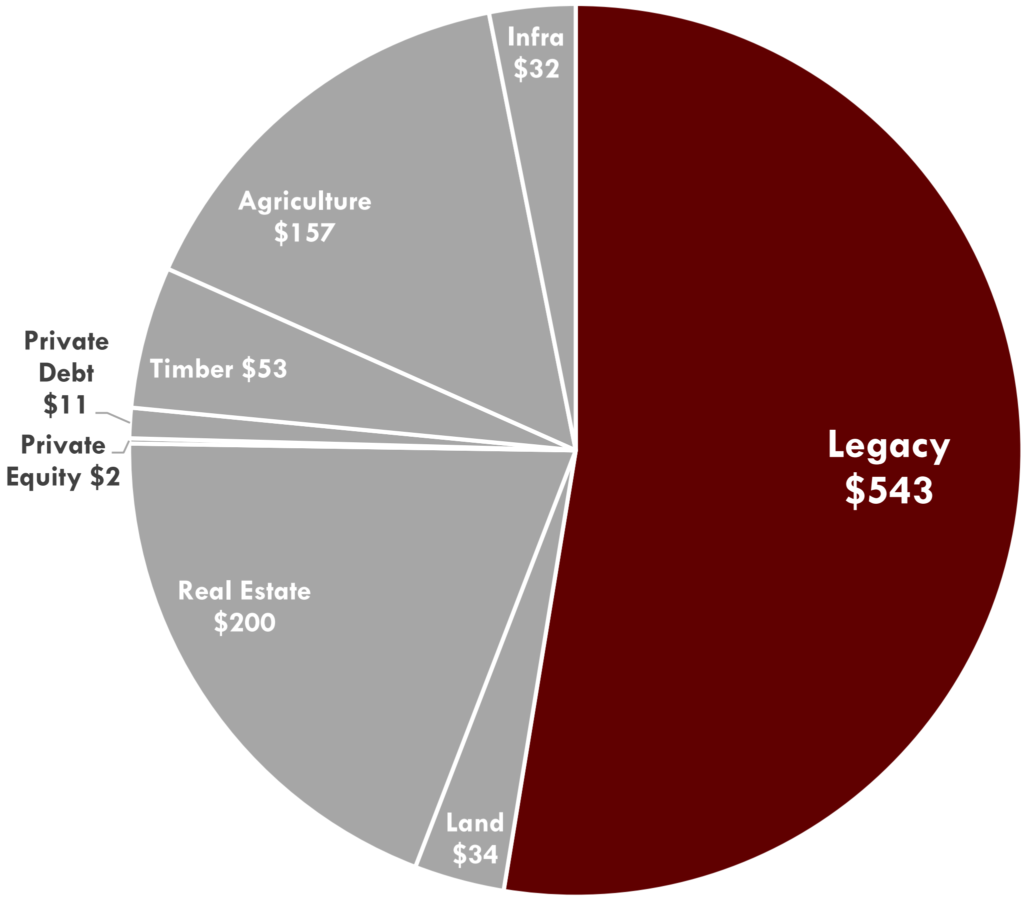
Based on projected year-end NAV provided by actuary
Assumes 100% of illiquid asset proceeds are reinvested into liquid investments



** - Based on NEPC public pension clients with more than $1B in assets. Combined total allocation for private equity & real estate*

Illiquid Assets – Current Composition

In Millions



- DPFP currently has ~ $543M or 26% of the total portfolio invested in illiquid "Legacy" assets.
- The "Legacy" assets have low expected go-forward returns with a wide-range of possible outcomes.
- These assets cannot be easily sold or liquidated at this time.

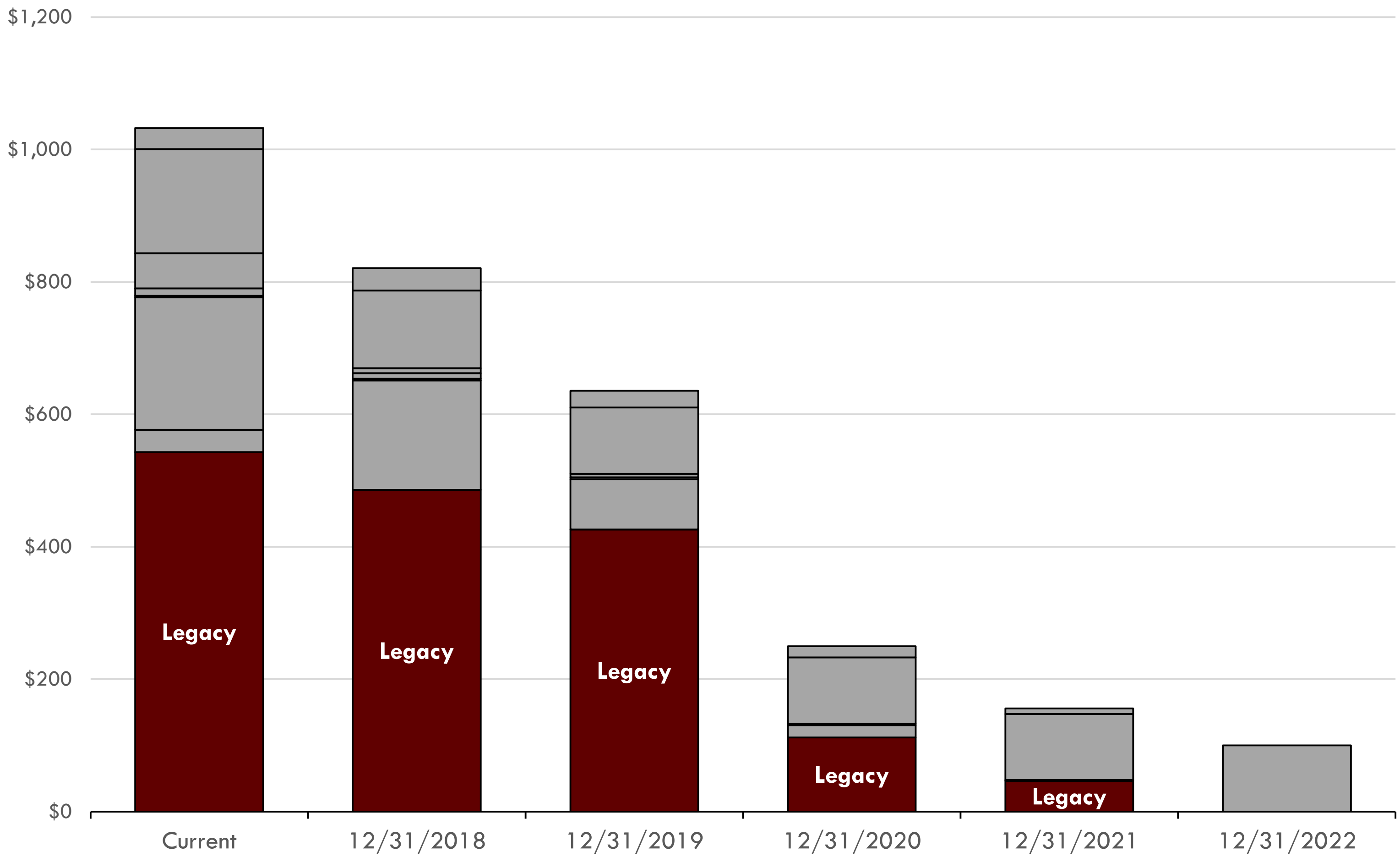
DPFP Asset Return Assumptions

In developing the 2017 actuarial valuation, Segal used the investment return assumptions listed in the below table. These were developed using NEPC's asset class return assumptions on most asset classes and modified return assumptions for the "Legacy" portfolio. This analysis will be updated for 2018 using the same methodology.

	Assumed Investment Return
2017	4.75%
2018	5.50%
2019	6.50%
2020 & Thereafter	7.25%

Legacy Asset Disposition Timeline

In Millions



	Current	12/31/2018	12/31/2019	12/31/2020	12/31/2021	12/31/2022
Legacy NAV (M)	$543	$486	$426	$112	$46	-
% of Illiquid Portfolio	53%	59%	67%	45%	30%	-
% of DPFP Portfolio	26%	23%	20%	5%	2%	-

Asset Allocation Considerations

Given that roughly a quarter of the DPFP portfolio is invested in "Legacy" illiquid assets, that likely cannot be liquidated for several years, how should the remainder of the portfolio be allocated?

Possible scenarios:

1. Overweight growth assets (public equity & opportunistic fixed income) in the liquid portion of the portfolio in an attempt to make up for the lower expected returns on "Legacy" portfolio.
2. Allocate liquid assets with agnostic view of "Legacy" portfolio.
3. Overweight downside protection and stability assets in the liquid portion of the portfolio given the volatility/risks in the "Legacy" portfolio. Add liquid growth assets as capital is returned from the "Legacy" illiquid pool of assets.

ILLIQUID ASSETS & ASSET ALLOCATION CONSIDERATIONS

DALLAS POLICE & FIRE PENSION SYSTEM

February 2018

BOSTON | ATLANTA | CHARLOTTE | CHICAGO | DETROIT | LAS VEGAS | PORTLAND | SAN FRANCISCO

ASSET ALLOCATION ANALYSIS

NEPC, LLC

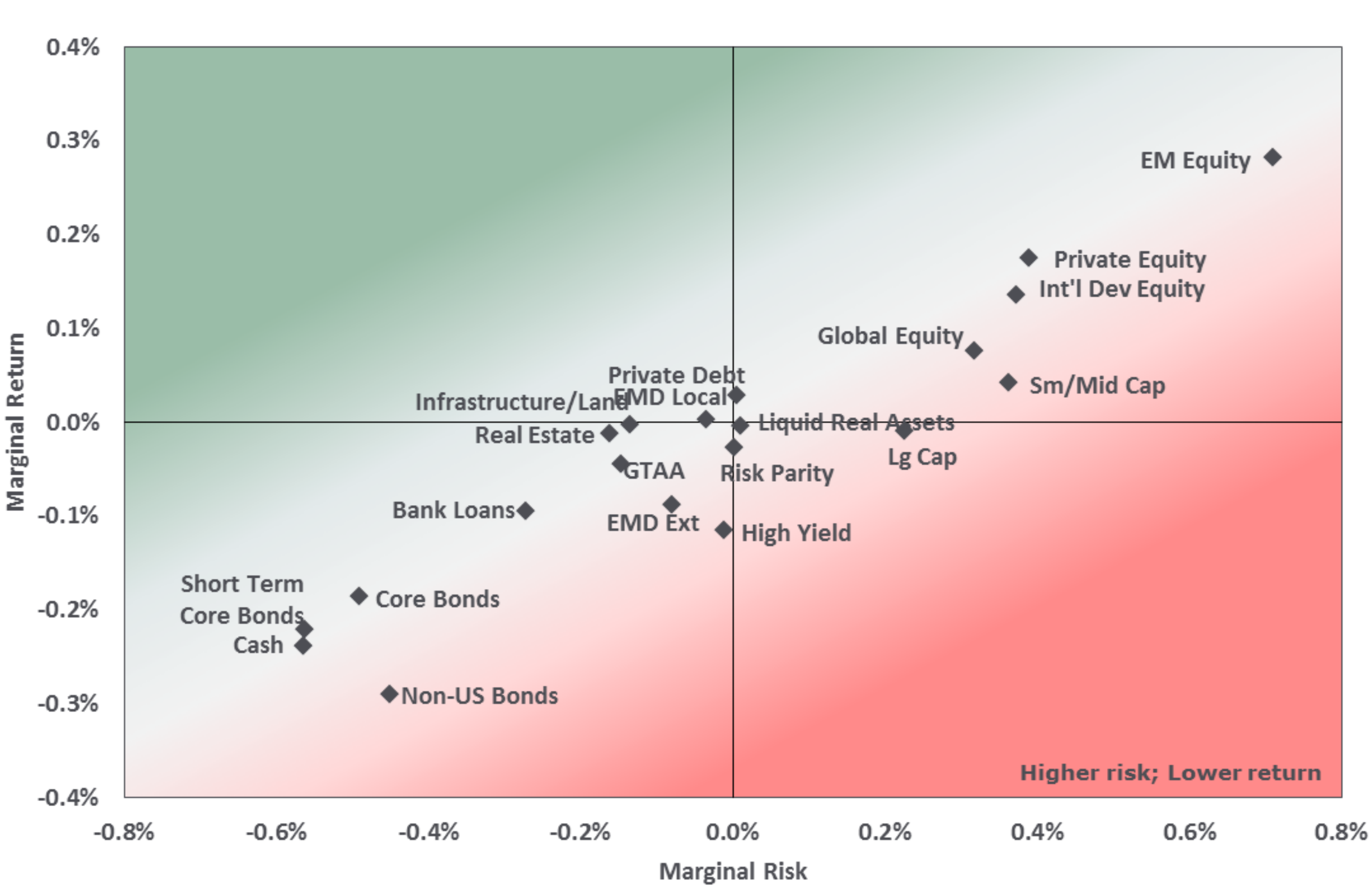
ANALYTICAL MODELING TOOLS

NEPC uses a variety of proprietary tools developed to assess strategic asset allocation changes and the impact of tactical adjustments

Approach	Advantages	Shortcomings
Mean-Variance	• Calculates most efficient portfolio for given volatility • Produces range of portfolios	• Relies on static assumptions and assumes normal distribution • Chosen constraints can drive results • Limits risk definition to volatility
Risk Budgeting	• Provides risk allocations • Recognizes that less efficient portfolios may have better risk balance	• Relies on Mean-Variance optimization assumptions • Defines risk as standard deviation • Ignores tail risks
Factor Analysis	• Recognizes underlying economic drivers of asset class volatility • Can identify risk concentrations across asset classes	• Requires intuitive belief of asset class relationships to underlying factors – less quantitative and more qualitative
Scenario Analysis	• Focuses on low-probability, high magnitude economic environments (tail risks) • Recognizes environmental biases of each asset class	• Offers opportunity to test risk tolerance to various outcomes but should not be used to construct best portfolio for each environment
Liquidity Analysis	• Recognizes a “risk” not captured in traditional tools: illiquidity • Highlights impact of changing cash flows (both investment-driven and exogenous)	• Requires portfolio specific cash flow and partnership details • Long-term planning tool – cannot easily adjust portfolio or compare different portfolios
Stochastic Forecasting	• Shows range of results based on Monte Carlo simulation • Includes natural feedback loops	• Percentiled results show ranges but not reasons • Each simulated trial represents a possible but highly unlikely path

MARGINAL RISK/RETURN HEAT MAP: 5-7 YRS

Impact of 5% allocation shifts on Current Policy Target risk/return



Most Efficient

~~Real Estate~~

~~Infra/Nat Resources~~

Core Bonds

Short Term Core Bonds

Least Efficient

US Sm/Mid Cap

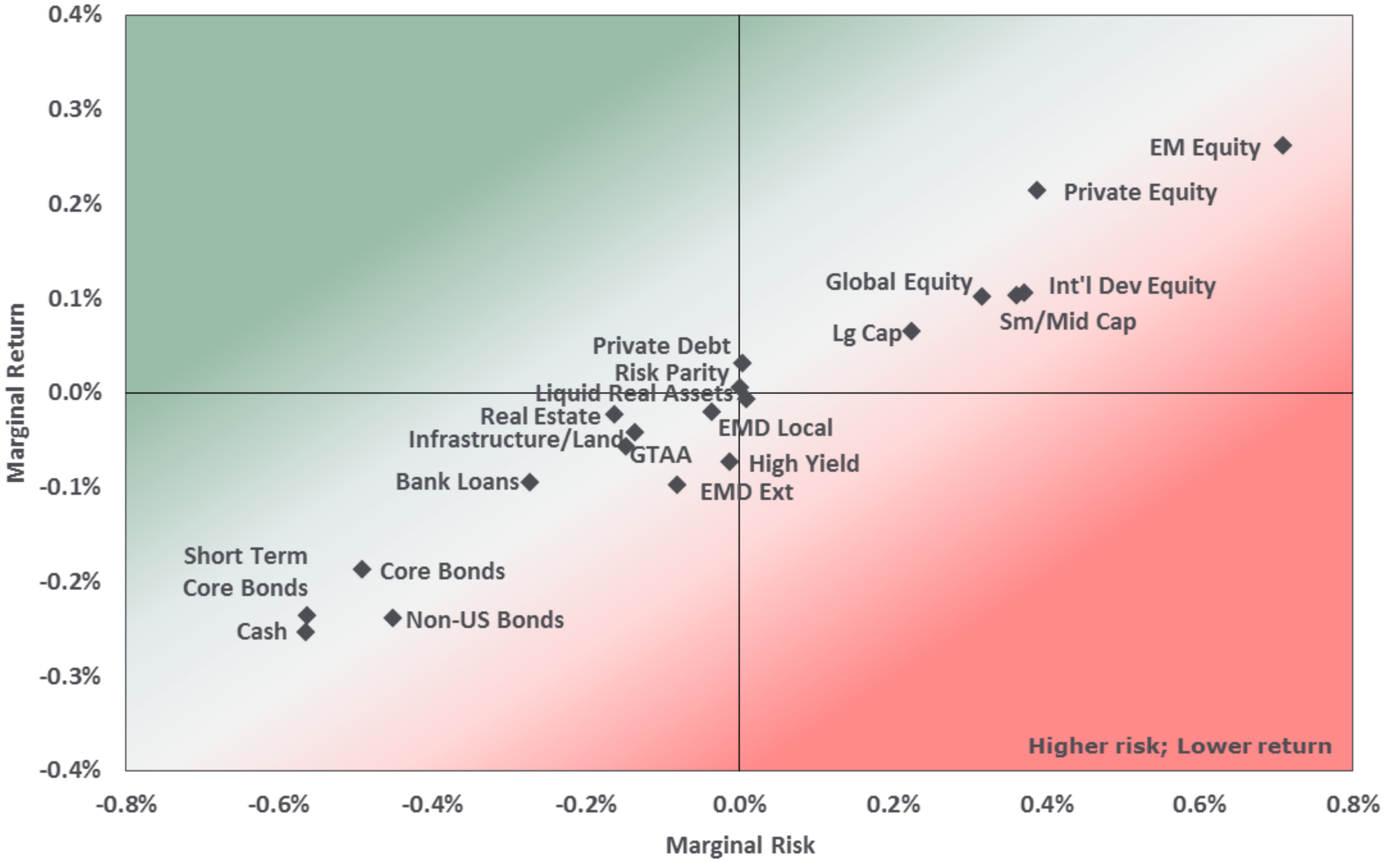
US Large Cap

High Yield

This heat map highlights potential investments that, when added to the portfolio, would provide a better risk-adjusted return. Right-sizing illiquid allocation requires other non-investment considerations.

MARGINAL RISK/RETURN HEAT MAP: 30 YRS

Impact of 5% allocation shifts on Current Policy Target risk/return



Most Efficient

Core Bonds

Short Term Core Bonds

Real Estate

Least Efficient

EM Equities

Intl Devl Equity

Small/Mid Cap

This heat map highlights potential investments that, when added to the portfolio, would provide a better risk-adjusted return. Right-sizing illiquid allocation requires other non-investment considerations.

12/31/2022 ASSET ALLOCATION PROFILES

	12/31/17 Actual	12/31/22 Targets: Current Policy	12/31/22 Targets: Mix A	12/31/22 Targets: Mix B
Cash	**6%**	**2%**		
Equity	**35%**	**30%**	**55%**	**55%**
Emerging Int'l Equities	2%	5%	5%	5%
Global Equity	20%	20%	45%	40%
Private Equity	0%	5%	5%	10%
Private Equity (Legacy Positions)	12%			
Fixed Income	**16%**	**33%**	**30%**	**30%**
Short Term Fixed Income + Cash	2%	2%	5%	5%
Core Fixed Income			10%	10%
Global Bonds	3%	3%		
High-Yield Bonds	4%	5%	3%	3%
EMD (50/50)	1%	6%	4%	4%
Bank Loans	5%	6%	3%	3%
Absolute Return & Structured Credit		6%		
Private Debt	1%	5%	5%	5%
Global Asset Allocation	**7%**	**10%**		**10%**
Risk Parity	4%	5%		10%
Global Tactical Asset Allocation	1%	3%		
Absolute Return	2%	2%		
Real Assets	**37%**	**25%**	**15%**	**5%**
Real Estate	11%	12%	10%	5%
Real Estate (Legacy Positions)	13%			
Infrastructure / Natural Resources	12%	10%		
Infra / Nat Resources (Legacy Positions)	1%			
Liquid Real Assets		3%	5%	
Illiquid Assets	**49%**	**32%**	**20%**	**20%**
Liquid Assets	**51%**	**68%**	**80%**	**80%**
Expected Return, 5-7 Years	**4.6%**	**6.2%**	**6.3%**	**6.4%**
Expected Return, 30 Years		**7.1%**	**7.5%**	**7.6%**
Standard Deviation	**11.2%**	**10.9%**	**12.8%**	**12.9%**
Sharpe Ratio	**0.23**	**0.38**	**0.34**	**0.34**
Sharpe Ratio (30 years)	**0.23**	**0.40**	**0.37**	**0.38**

Themes for next 5 years

Global and non-US equity mandates continue to present attractive relative returns

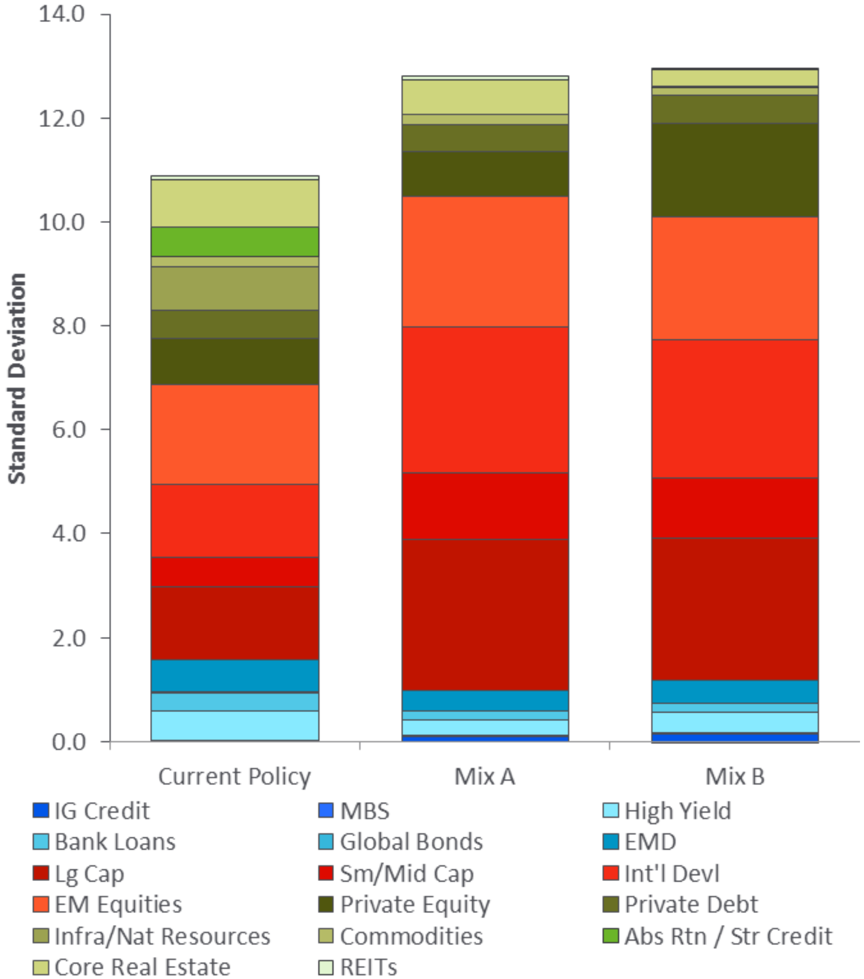
"Safe haven" fixed income should be maintained; US implementation preferred

Continued management of legacy illiquid positions

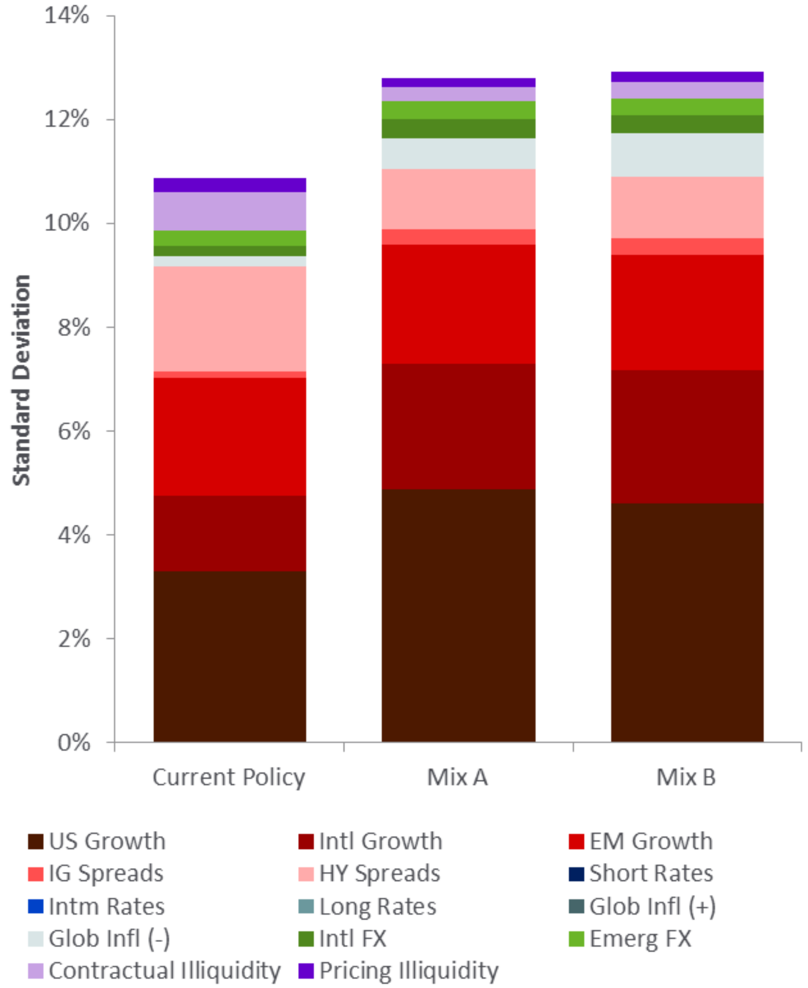
Consider alternative sources for inflation exposure

RISK ALLOCATIONS

Asset Class Basis

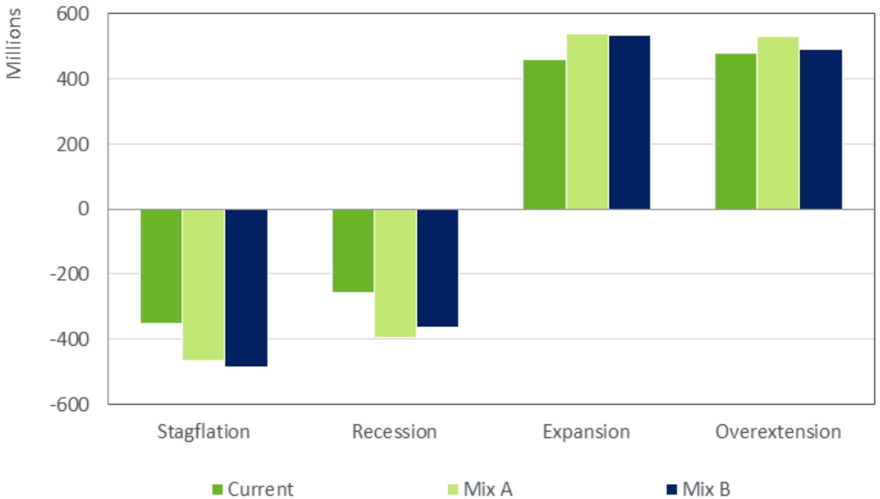


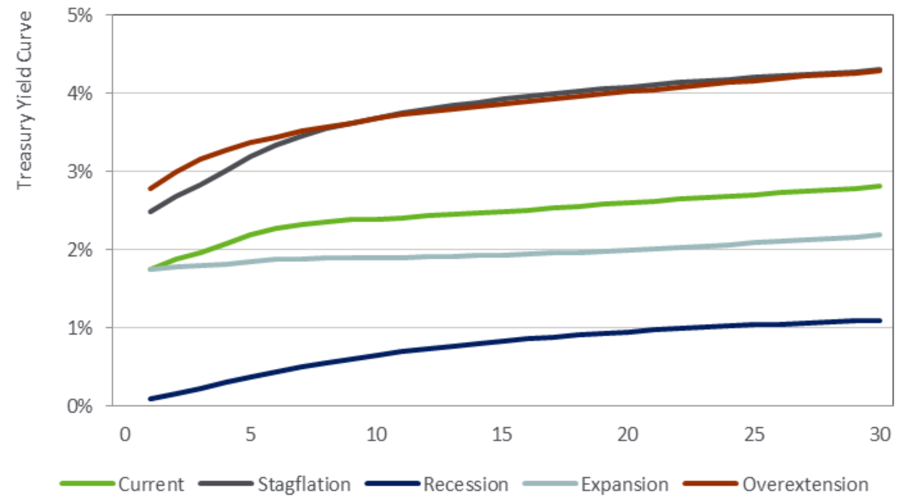
Factor Basis



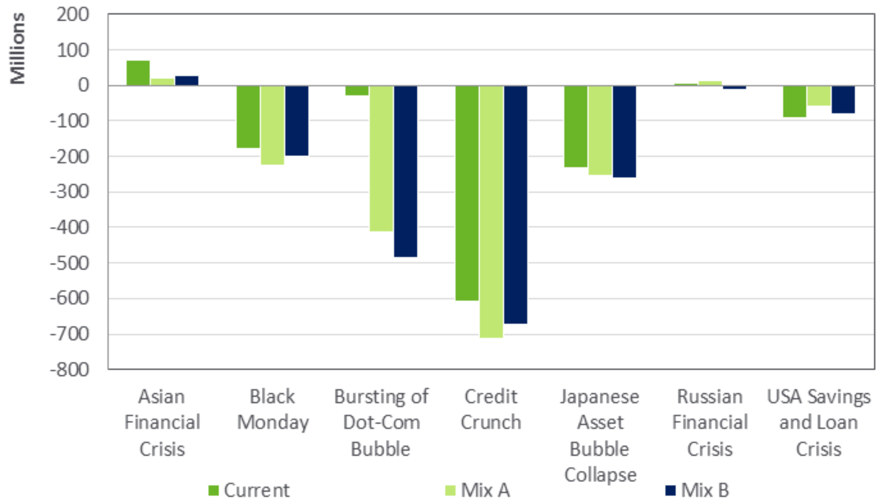
SCENARIO ANALYSIS

Economic Regime Analysis





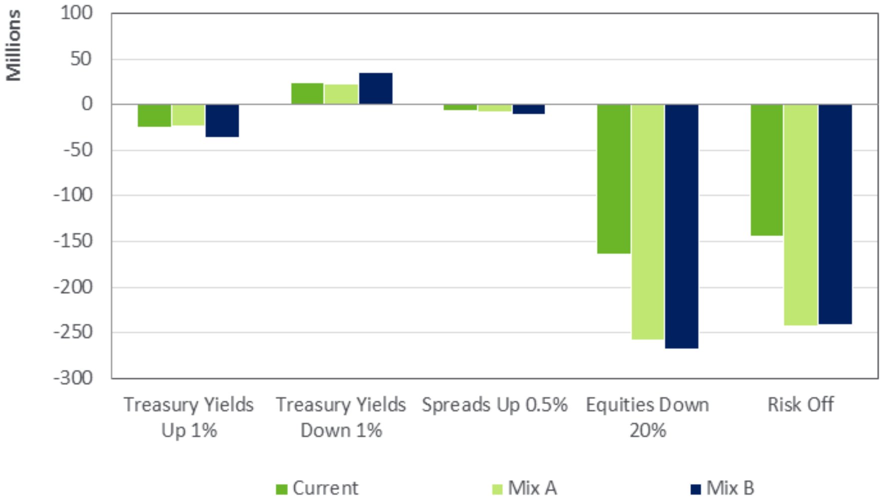
Historical Events

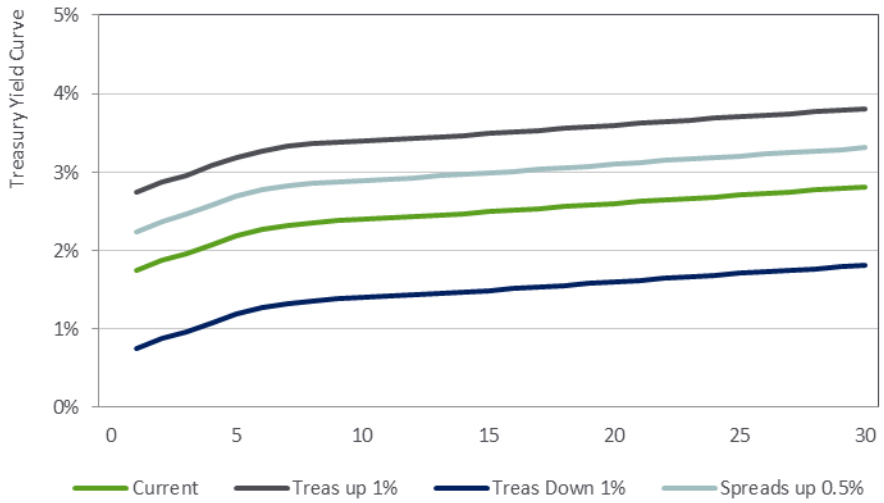


Historical Event	Start	End
Asian Financial Crisis	Jul-97	Oct-98
Black Monday	Oct-87	Oct-87
Bursting of Dot-Com Bubble	Mar-00	Sep-01
Credit Crunch	Jul-07	Nov-08
Japanese Asset Bubble Collapse	Dec-89	Oct-90
Russian Financial Crisis	Aug-98	Oct-98
USA Savings and Loan Crisis	Jan-87	Jan-88

SCENARIO ANALYSIS

Market Shocks





* Risk off scenario assumes 20% reduction in equities, 1% reduction in Treasury yields, 0.5% increase in spreads.

TRANSITION TO CURRENT POLICY

	12/31/17 Actual	12/31/18 Target	12/31/19 Target	12/31/20 Target	12/31/21 Target	12/31/22 Target
Cash	**6%**	**2%**	**2%**	**2%**	**2%**	**2%**
Equity	**35%**	**34%**	**32%**	**30%**	**30%**	**30%**
Emerging Int'l Equities	2%	4%	4%	5%	5%	5%
Global Equity	20%	20%	20%	20%	20%	20%
Private Equity	0%	0%	0%	0%	3%	5%
Private Equity (Legacy Positions)	12%	10%	8%	5%	2%	
Fixed Income	**16%**	**22%**	**26%**	**32%**	**33%**	**33%**
Short Term Fixed Income + Cash	2%	2%	2%	2%	2%	2%
Core Fixed Income						
Global Bonds	3%	3%	3%	3%	3%	3%
High-Yield Bonds	4%	3%	4%	5%	5%	5%
EMD (50/50)	1%	4%	4%	6%	6%	6%
Bank Loans	5%	6%	6%	6%	6%	6%
Absolute Return & Structured Credit		2%	4%	6%	6%	6%
Private Debt	1%	2%	3%	4%	5%	5%
Global Asset Allocation	**7%**	**8%**	**9%**	**10%**	**10%**	**10%**
Risk Parity	4%	4%	5%	5%	5%	5%
Global Tactical Asset Allocation	1%	2%	2%	3%	3%	3%
Absolute Return	2%	2%	2%	2%	2%	2%
Real Assets	**37%**	**34%**	**31%**	**26%**	**25%**	**25%**
Real Estate	11%	10%	7%	13%	12%	12%
Real Estate (Legacy Positions)	13%	11%	11%			
Infrastructure / Natural Resources	12%	10%	10%	10%	10%	10%
Infra / Nat Resources (Legacy Positions)	1%	1%	1%	0%		
Liquid Real Assets		1%	1%	3%	3%	3%
Illiquid Assets	**49%**	**45%**	**41%**	**32%**	**32%**	**32%**
Liquid Assets	**51%**	**55%**	**59%**	**68%**	**68%**	**68%**
Expected Return	**4.6%**	**4.9%**	**4.9%**	**5.8%**	**6.0%**	**6.2%**
Standard Deviation	**11.2%**	**11.4%**	**11.0%**	**10.9%**	**10.9%**	**10.9%**
Sharpe Ratio	**0.23**	**0.25**	**0.27**	**0.35**	**0.37**	**0.38**

* Legacy positions reflect internal DPFP projections for returns and sales/distributions, and NEPC assumptions for volatility and correlations.

TRANSITION TO MIX A

	12/31/17 Actual	12/31/18 Target	12/31/19 Target	12/31/20 Target	12/31/21 Target	12/31/22 Target
Cash	**6%**					
Equity	**35%**	**44%**	**45%**	**52%**	**52%**	**55%**
Emerging Int'l Equities	2%	4%	3%	5%	5%	5%
Global Equity	20%	30%	34%	42%	42%	45%
Private Equity	0%	0%	0%	0%	3%	5%
Private Equity (Legacy Positions)	12%	10%	8%	5%	2%	
Fixed Income	**16%**	**23%**	**24%**	**26%**	**28%**	**30%**
Short Term Fixed Income + Cash	2%	5%	5%	5%	5%	5%
Core Fixed Income		6%	6%	7%	8%	10%
Global Bonds	3%					
High-Yield Bonds	4%	3%	3%	3%	3%	3%
EMD (50/50)	1%	4%	4%	4%	4%	4%
Bank Loans	5%	3%	3%	3%	3%	3%
Absolute Return & Structured Credit						
Private Debt	1%	2%	3%	4%	5%	5%
Global Asset Allocation	**7%**					
Risk Parity	4%					
Global Tactical Asset Allocation	1%					
Absolute Return	2%					
Real Assets	**37%**	**33%**	**31%**	**22%**	**20%**	**15%**
Real Estate	11%	10%	7%	11%	10%	10%
Real Estate (Legacy Positions)	13%	11%	11%			
Infrastructure / Natural Resources	12%	8%	6%	6%	5%	
Infra / Nat Resources (Legacy Positions)	1%	1%	1%	0%		
Liquid Real Assets		3%	5%	5%	5%	5%
Illiquid Assets	**49%**	**42%**	**37%**	**26%**	**25%**	**20%**
Liquid Assets	**51%**	**58%**	**63%**	**74%**	**75%**	**80%**
Expected Return	**4.6%**	**5.0%**	**5.1%**	**6.0%**	**6.2%**	**6.3%**
Standard Deviation	**11.2%**	**12.2%**	**12.0%**	**12.7%**	**12.6%**	**12.8%**
Sharpe Ratio	**0.23**	**0.24**	**0.25**	**0.32**	**0.33**	**0.34**

* Legacy positions reflect internal DPFP projections for returns and sales/distributions, and NEPC assumptions for volatility and correlations.

TRANSITION TO MIX B

	12/31/17 Actual	12/31/18 Target	12/31/19 Target	12/31/20 Target	12/31/21 Target	12/31/22 Target
Cash	**6%**					
Equity	**35%**	**41%**	**42%**	**52%**	**52%**	**55%**
Emerging Int'l Equities	2%	4%	4%	5%	5%	5%
Global Equity	20%	27%	28%	37%	37%	40%
Private Equity	0%	0%	2%	5%	8%	10%
Private Equity (Legacy Positions)	12%	10%	8%	5%	2%	
Fixed Income	**16%**	**23%**	**24%**	**26%**	**28%**	**30%**
Short Term Fixed Income + Cash	2%	5%	5%	5%	5%	5%
Core Fixed Income		6%	6%	7%	8%	10%
Global Bonds	3%					
High-Yield Bonds	4%	3%	3%	3%	3%	3%
EMD (50/50)	1%	4%	4%	4%	4%	4%
Bank Loans	5%	3%	3%	3%	3%	3%
Absolute Return & Structured Credit						
Private Debt	1%	2%	3%	4%	5%	5%
Global Asset Allocation	**7%**	**6%**	**8%**	**10%**	**10%**	**10%**
Risk Parity	4%	6%	8%	10%	10%	10%
Global Tactical Asset Allocation	1%					
Absolute Return	2%					
Real Assets	**37%**	**30%**	**26%**	**12%**	**10%**	**5%**
Real Estate	11%	10%	7%	6%	5%	5%
Real Estate (Legacy Positions)	13%	11%	11%			
Infrastructure / Natural Resources	12%	8%	6%	6%	5%	
Infra / Nat Resources (Legacy Positions)	1%	1%	1%	0%		
Liquid Real Assets						
Illiquid Assets	**49%**	**42%**	**39%**	**26%**	**25%**	**20%**
Liquid Assets	**51%**	**58%**	**61%**	**74%**	**75%**	**80%**
Expected Return	**4.6%**	**4.9%**	**5.1%**	**6.1%**	**6.3%**	**6.4%**
Standard Deviation	**11.2%**	**11.9%**	**11.8%**	**12.8%**	**12.7%**	**12.9%**
Sharpe Ratio	**0.23**	**0.25**	**0.26**	**0.32**	**0.34**	**0.34**

* Legacy positions reflect internal DPFP projections for returns and sales/distributions, and NEPC assumptions for volatility and correlations.

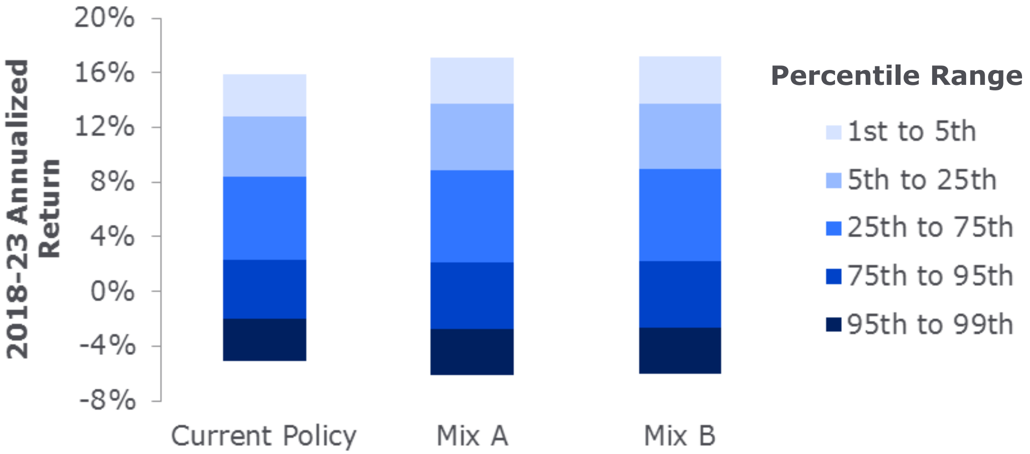
TRANSITIONING TO LONG TERM TARGETS

Transition to Current Policy	Yrs 1-6	Yrs 7-30	Yrs 1-30
Average Expected Return	5.4%	7.4%	7.0%
Average Standard Deviation	11.0%	10.9%	10.9%
Sharpe Ratio	0.31	0.41	0.39

Transition to Mix A	Yrs 1-6	Yrs 7-30	Yrs 1-30
Average Expected Return	5.5%	7.8%	7.4%
Average Standard Deviation	12.2%	12.8%	12.7%
Sharpe Ratio	0.29	0.38	0.36

Transition to Mix B	Yrs 1-6	Yrs 7-30	Yrs 1-30
Average Expected Return	5.6%	7.9%	7.5%
Average Standard Deviation	12.2%	12.9%	12.8%
Sharpe Ratio	0.29	0.39	0.37

- **While return prospects are lower for next 5 years, avoiding major drawdown is paramount**
  - Preserve large enough asset base for future growth



2018 THEMES AND OPPORTUNITIES

NEPC, LLC

THEMES AND OPPORTUNITIES

Key Market Themes

Key Market Themes are factors that define global markets and can be expected to both evolve and remain relevant without a clear timeline of conclusion. At times, themes may be challenged. Disruption of a theme will likely produce significant volatility and change market dynamics. Our intent is for clients to be aware of these themes and understand their implications.

Current Opportunities

Current Opportunities are investment ideas that represent an action with the goal of improving investment outcomes relative to an investor's strategic asset allocation. It is not our intent that the full list of opportunities be implemented. Rather, we encourage a focus on the actions that offer a material benefit to each client's strategic allocation relative to their unique objectives and constraints. These investment ideas are likely to change more frequently as market dynamics and valuations shift over time.

THEMES AND OPPORTUNITIES

The outlook for developed market equities outside the US has improved

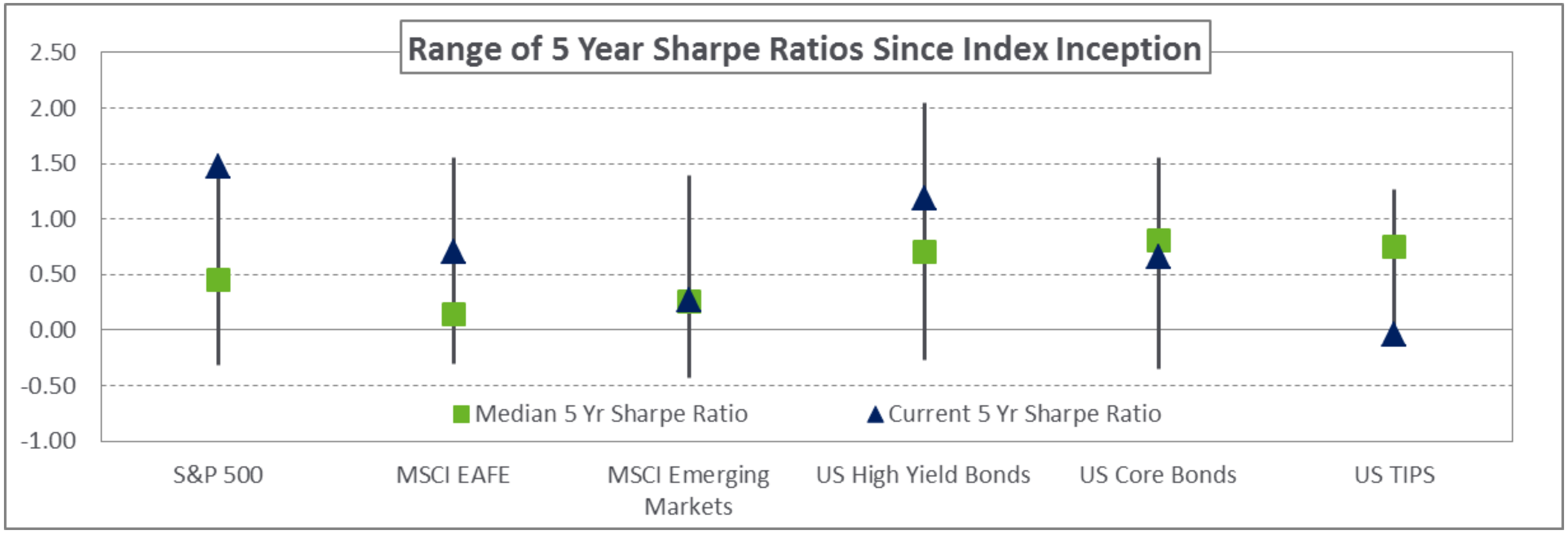
Growth conditions across the globe are on the upswing supported by easy financial conditions and an improved corporate earnings outlook

We encourage reducing exposure to assets that have outperformed expectations over a prolonged period such as US stocks and high yield

Tilt exposure to assets underperforming expectations in recent years, particularly emerging market equities, developed market equities, and US TIPS

Market stability must not elicit complacency, we encourage investors to increase exposure to strategies that mitigate market drawdowns

Look to rebalance “safe haven” fixed income exposure back to strategic targets



Index Inception: S&P 500 - 1926, MSCI EAFE – 1970, MSCI EM – 1988, US High Yield – 1983, US Core Bonds – 1976, US TIPS – 1997

Source: Ibbotson-Morningstar, eVestment, Sharpe Ratio range spans 5th to 95th percentile

2018 THEMES AND OPPORTUNITIES

Key Market Themes

- Extended US Economic Cycle
- Synchronized Economic Resurgence
- Federal Reserve Gradualism
- China Transitions
- Globalization Backlash

Current Opportunities

- Trim US Equity Gains
- Overweight Non-US Developed Market Equities
- Maintain a Market Overweight to Emerging Market Equities
- Allocate to TIPS from Core Bonds
- Reduce Return Seeking Credit Exposure
- Fund Emerging Local Debt
- Add Macro Hedge Funds
- Add Long Volatility Exposure

KEY MARKET THEMES

KEY MARKET THEMES

Extended US Economic Cycle

Economic cycles do not die of old age

The US economy is in an extended expansionary cycle despite being eight years removed from the last recession

Financial health of US consumers and ongoing recovery of the housing market continue to drive economic growth

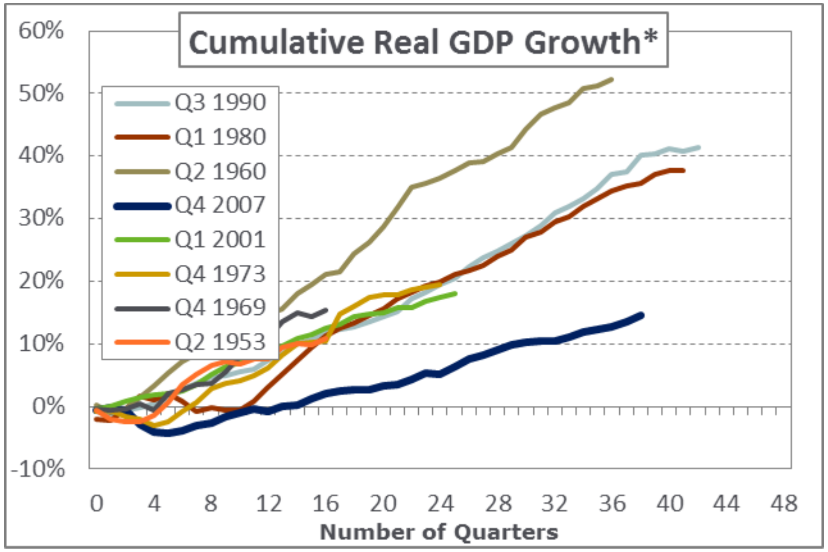
A prolonged US economic expansion can support a continued rally for US equities despite elevated valuation levels

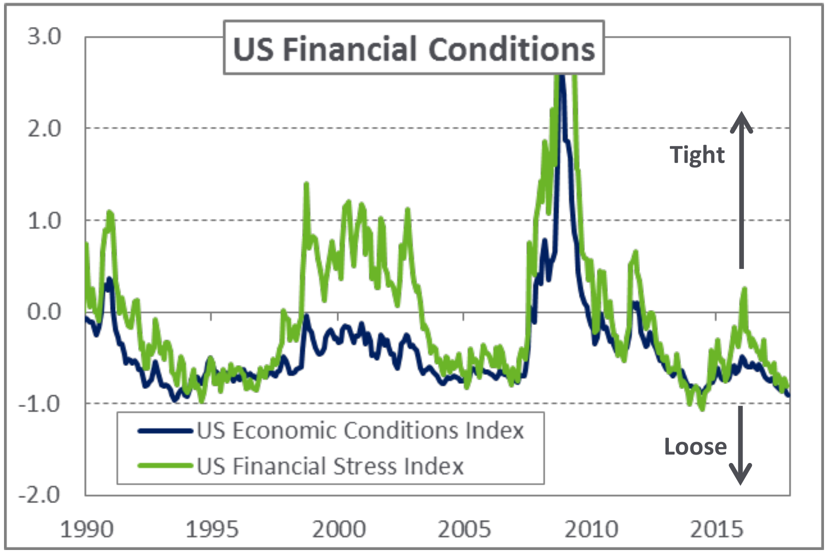
US financial conditions remain loose and support steady economic gains

Low inflation provides a foundation for positive economic conditions and reinforces the Fed's gradual monetary policy approach

Moderating US dollar strength is another form of easy financial conditions, benefiting global trade flows and credit creation

Reversal in these easy conditions may be fueled by actions outside the US, such as a misstep by global central banks and/or increased volatility in the Chinese yuan





*Source: (Top) Bloomberg,*Cumulative GDP growth from prior cycle peak*
Source: (Bottom) Federal Reserve Bank of Chicago and Kansas City

KEY MARKET THEMES

Extended US Economic Cycle

Excess capacity remains in the system and provides fuel for the expansion

Labor market gains have been robust but slack remains as many have not returned to the workforce

Muted wage gains and low inflation metrics are reflective of the excess capacity remaining in the US economy

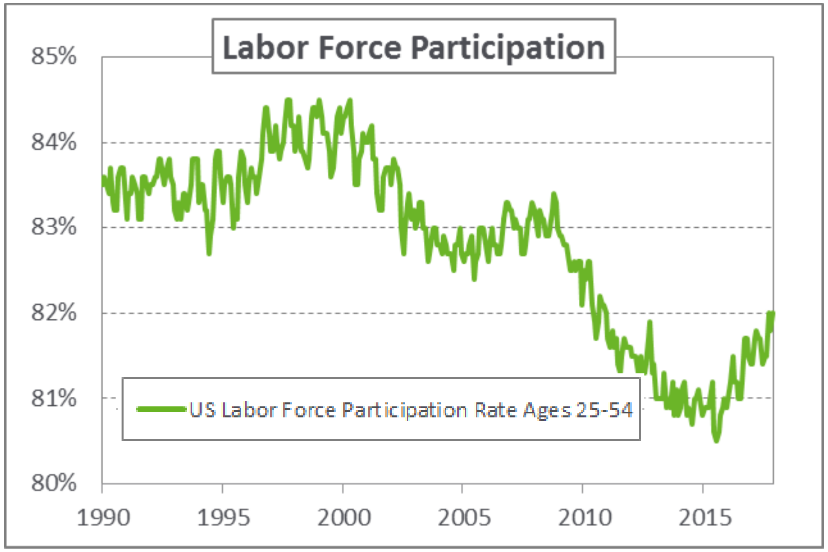
Tax cuts and fiscal stimulus can potentially remove spare economic capacity and be a catalyst for an uptick in inflation measures

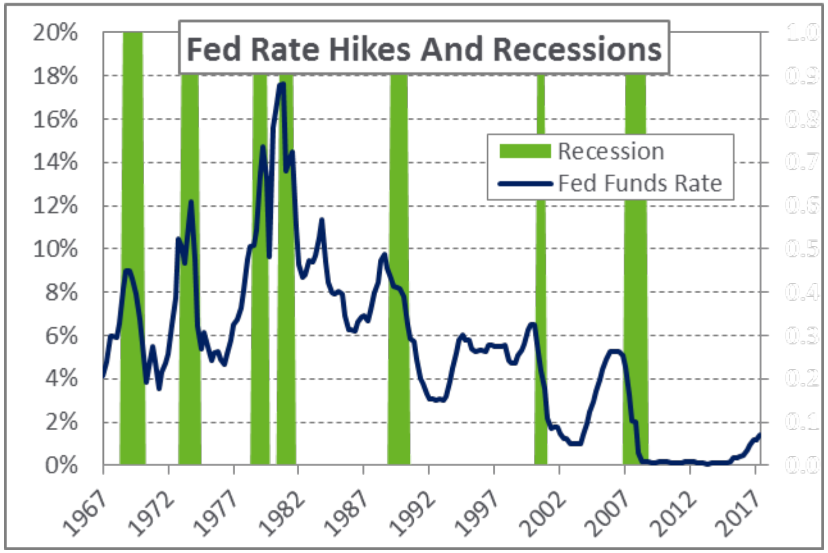
US recession concerns are muted

An acceleration in inflation leading to a tightening of financial conditions has historically been a catalyst to end economic expansions

However, improved US household balance sheets have room to expand and support further consumer spending gains

Improving global economic conditions reinforce an expansion of the US economy as global growth factors synchronize





Source: (Top) Federal Reserve Bank of St. Louis

Source: (Bottom) Federal Reserve, NEPC

KEY MARKET THEMES

Synchronized Economic Resurgence

Global economic conditions are improving in a synchronized fashion

Coordinated global growth factors reinforce economic gains across the globe and are distinct from the extension of the US economic cycle

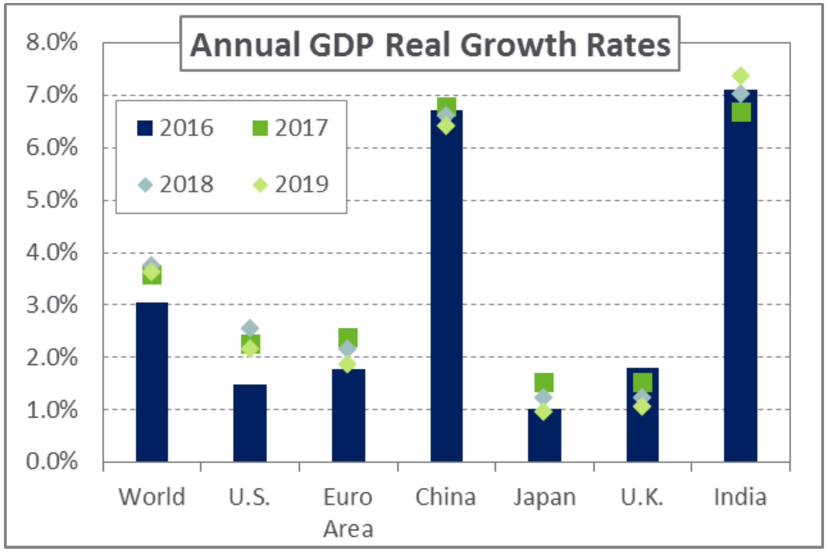
Non-US corporate revenues and equities are best positioned to benefit from a widespread boost in global economic conditions

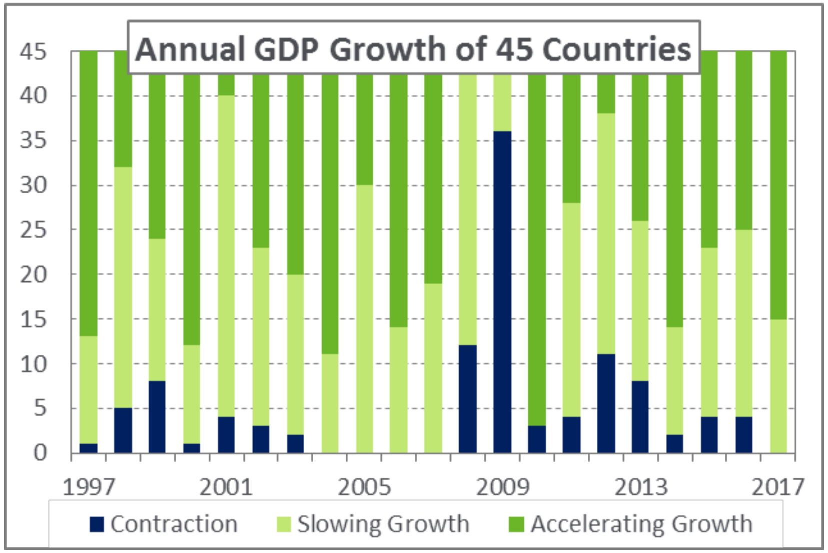
Positive growth rates harmonized across the globe are relatively rare

Conditions are the result of Europe, Japan, and large parts of the emerging world transitioning out of economic malaise

Persistence of the theme over several years would provide a substantial benefit to equity markets globally – specifically in Europe and Japan

Historically, periods of synchronized growth have been derailed by higher inflation levels and central banks tightening policy





Source: (Top) OECD
Source: (Bottom) OECD

KEY MARKET THEMES

Synchronized Economic Resurgence

Erosion of excess economic capacity is a catalyst to boost economic gains

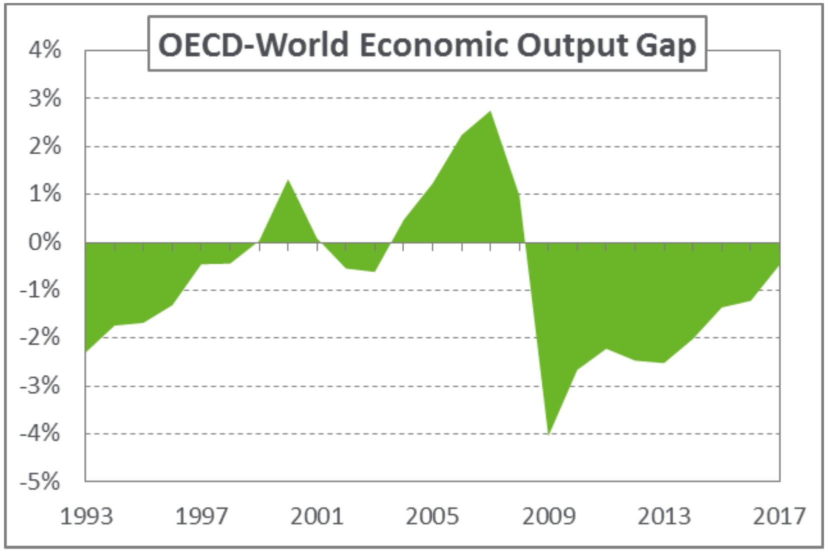
Despite recent labor market improvements, potential for labor reform in Europe and improved workforce participation in Japan offer multi-year benefits to economic growth

Material decline in emerging market inflation provides a cushion for real interest rates to fall and fuel an expansion of economic activity

Economic resurgence is delicate and can be disrupted by lingering global risk factors

US dollar strength, dislocation in China's credit expansion, and restrictive US trade policy pose the greatest threats

The foundation of synchronized economic resurgence is the continuation of positive trends associated with the other key market themes



Source: (Top) OECD
Source: (Bottom) IMF

KEY MARKET THEMES

Federal Reserve Gradualism

The Federal Reserve is expected to slowly increase interest rates

Expected path of Fed policy through 2020 matters more than timing of the next hike as the disconnect between market expectations and Fed signaling has grown

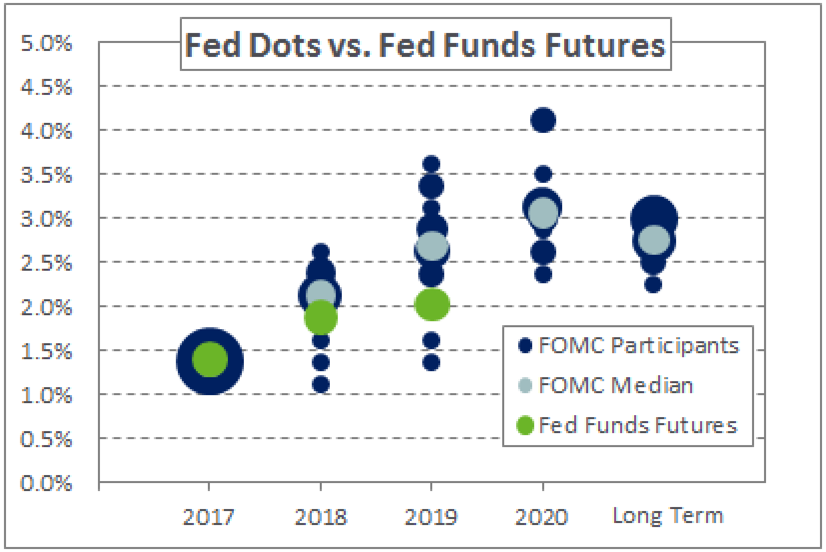
A relatively accommodative Fed is likely to continue, unless there is a dramatic acceleration in inflation

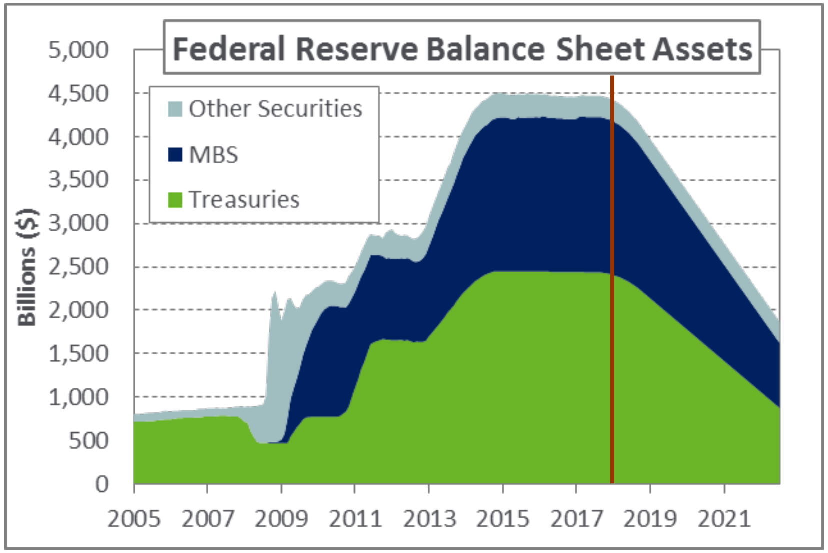
The Fed's balance sheet normalization is a low grade tightening of monetary policy but its impact is untested

Fed is expected to be careful and data dependent yet balance sheet disbursement into a strong economy will likely have tightening effects – in the same way balance sheet expansion had easing effects

The balance sheet will gradually shrink over time assuming conditions remain supportive

The gradual progression of balance sheet reduction combined with the accommodative policies of global central banks supports easy global financial conditions





Source: (Top) Bloomberg, NEPC
Source: (Bottom) Bloomberg, NEPC

KEY MARKET THEMES

Federal Reserve Gradualism

Gradualism is the policy of choice globally as the major central banks manage unprecedented initiatives

ECB's QE program is expanding but at a slower rate

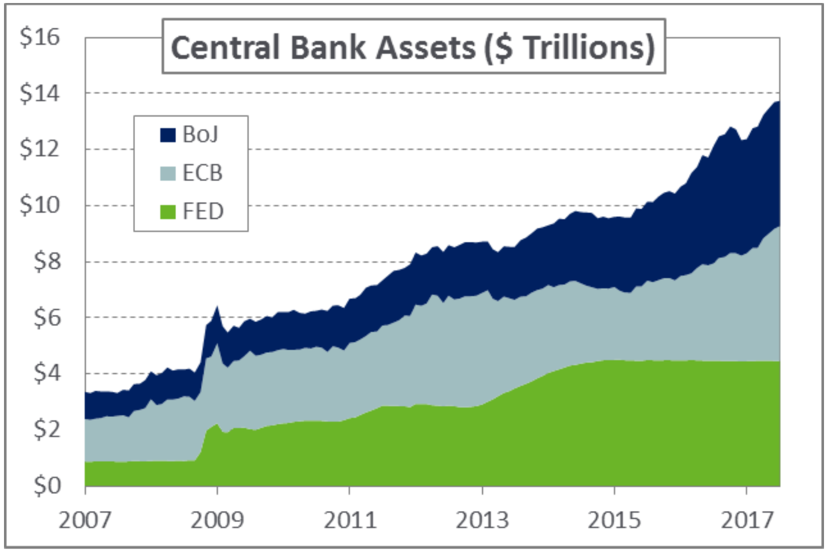
However, the reinvestment of balance sheet holdings is likely to continue for an extended period of time

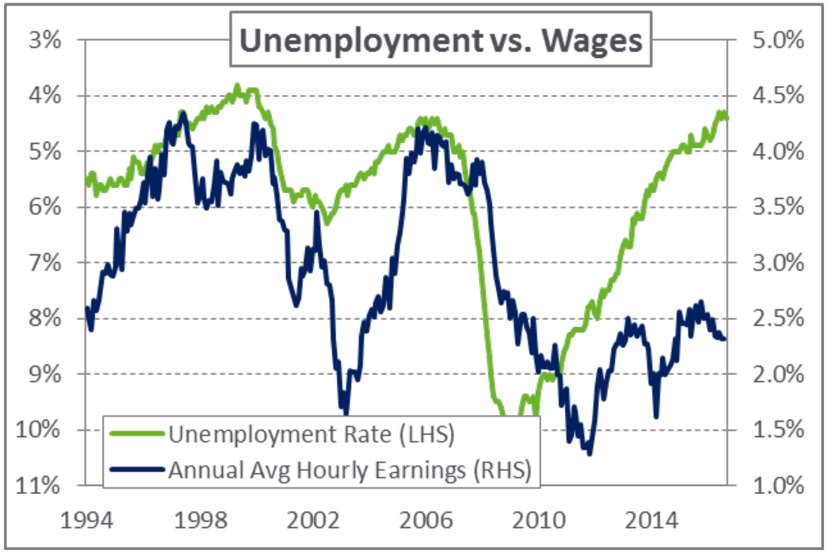
Bank of Japan's QE yield-curve control program has rapidly slowed bond purchases but solidified steepness in the yield curve

Inflation expected to shift marginally higher in the coming years

Improvements in wage growth and aggregate economic activity support modest upticks in inflation but still within the Fed's tolerance bands to gradually raise rates

Fed has stated a willingness to let the economy "run hot" and accept some inflation to repair the deflationary effects of the past decade





Source: (Top) Bloomberg, NEPC
Source: (Bottom): Bloomberg, FRED

KEY MARKET THEMES

China Transitions

China is the global growth engine but faces fundamental transitions

China's economic transition is pivoting from production and investment focused to a service and consumption based economy

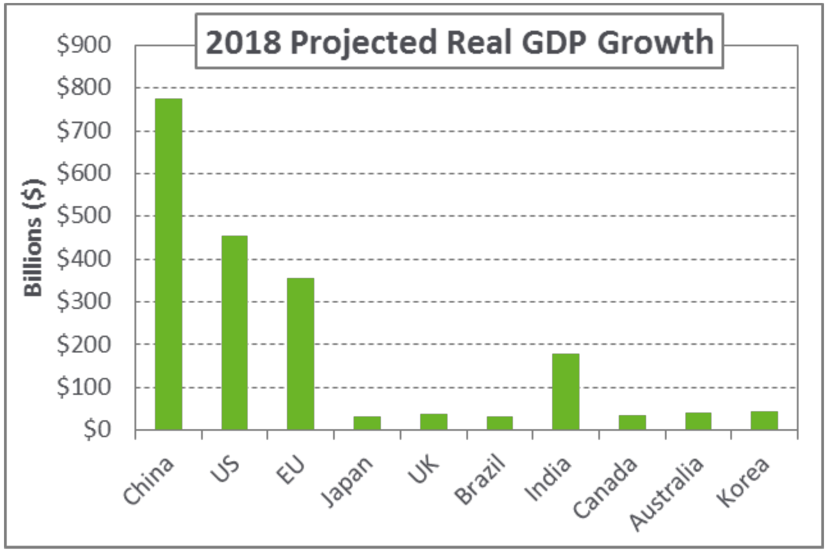
Fixed investment is required to sustain the production based economy and support employment as the rural population moves to urban centers

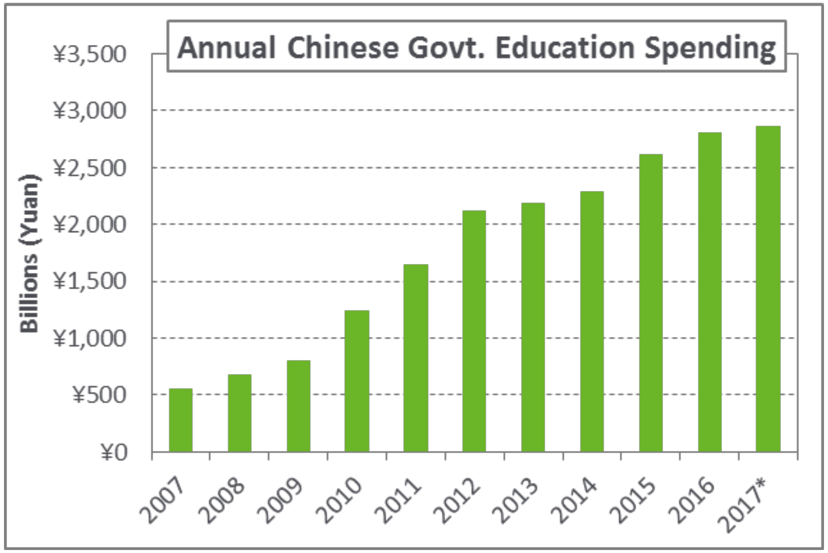
Any disruption to these transitions will have global repercussions due to China's role in the global economy

China must manage competing social goals in attempting to sustain growth

Engineering an orderly transition to a consumer-led economy requires supporting employment outside the major cities and improving quality of life metrics such as air quality in the urban centers

Future growth in a services based economy requires advancement in productivity, technology, and a more skilled labor force





Source: (Top) Bloomberg

*Source: (Bottom) Bloomberg, *Includes estimate for Nov/Dec 2017*

KEY MARKET THEMES

China Transitions

The PBOC is tasked with straddling a delicate path as the economy evolves

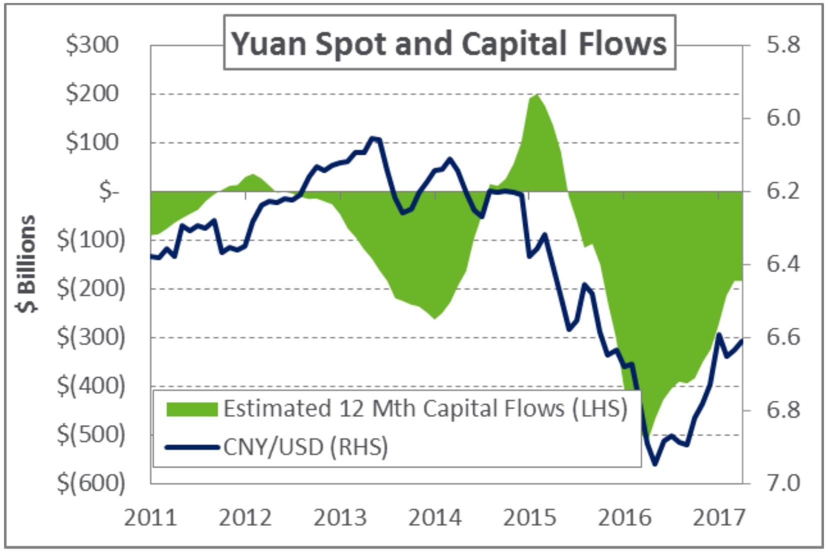
China maintains control of its currency and monetary policy but would have to make concessions to open its capital account and allow the free movement of capital in order to encourage investment

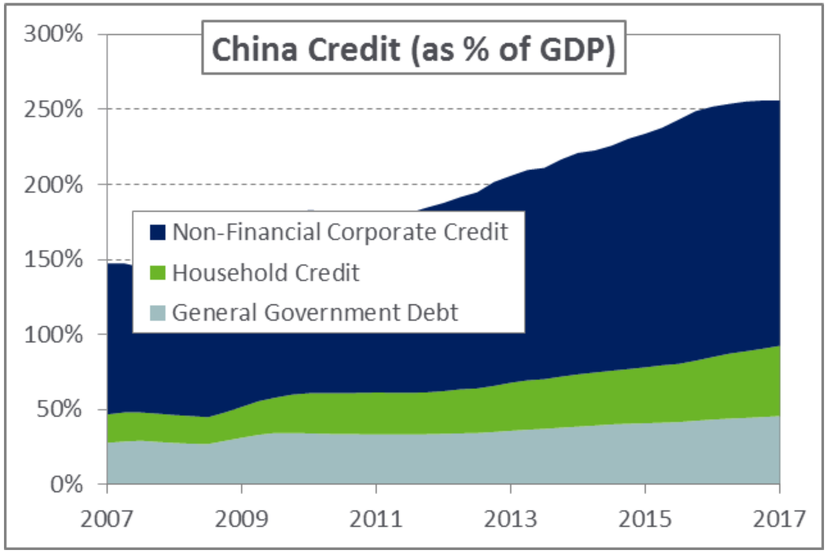
Restrictions on capital markets are slowly being eased, with an eye towards limiting social disruption

China's government is negotiating a balance of tightening credit expansion and support for economic growth

Continued credit expansion and real estate development risk inflating asset price bubbles and pose a systemic risk

Markets have responded positively to the PBOC's management of a more stable yuan as capital outflow pressure has eased but currency devaluation remains a tail risk





Source: (Top) Bloomberg, NEPC
Source: (Bottom) Bank of International Settlements

KEY MARKET THEMES

Globalization Backlash

Uneven economic growth and wage gains have fueled political discontent in the developed world

Election results in France have assuaged fears of political gridlock in the EU

Italian election in first half of 2018 is another potential flashpoint on globalization

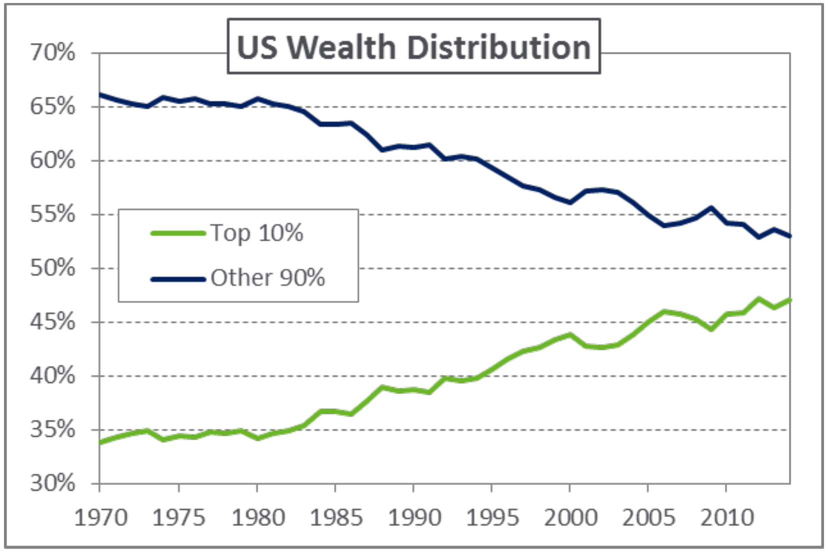
Anti-establishment political bias is likely a long term trend and potentially leads to higher levels of currency volatility over time

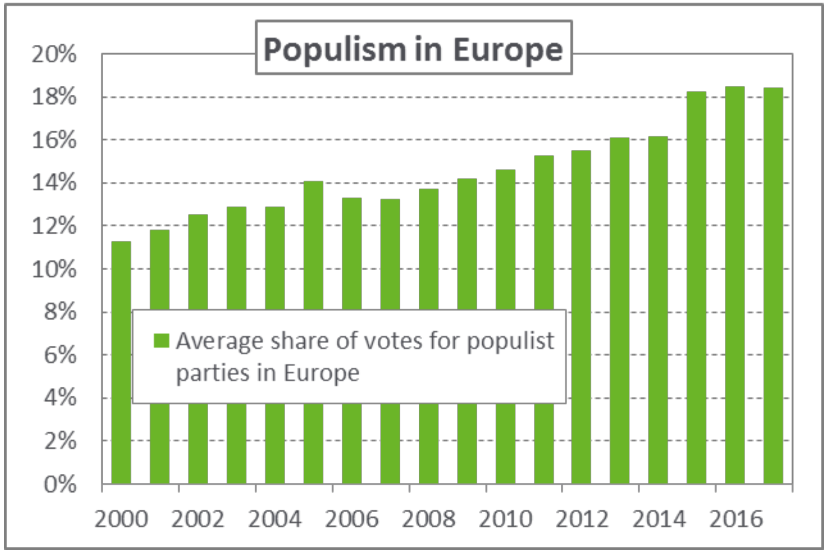
For many nations, a turn inward is associated with globalization fatigue

Often fuels greater expression of nationalism and increased geopolitical risks as multilateral relationships are reassessed

Populist movements destabilize the political order and shifts away from political orthodoxy heighten tail risks

However, equity markets often overreact to geopolitical concerns and sell-offs can be a buying opportunity for investors





Source: (Top) World Wealth & Income Database
Source: (Bottom) World Bank

KEY MARKET THEMES

Globalization Backlash

Major shifts in US trade policy did not materialize in 2017

However, a more aggressive protectionist policy would represent a material risk to global markets and the world economy

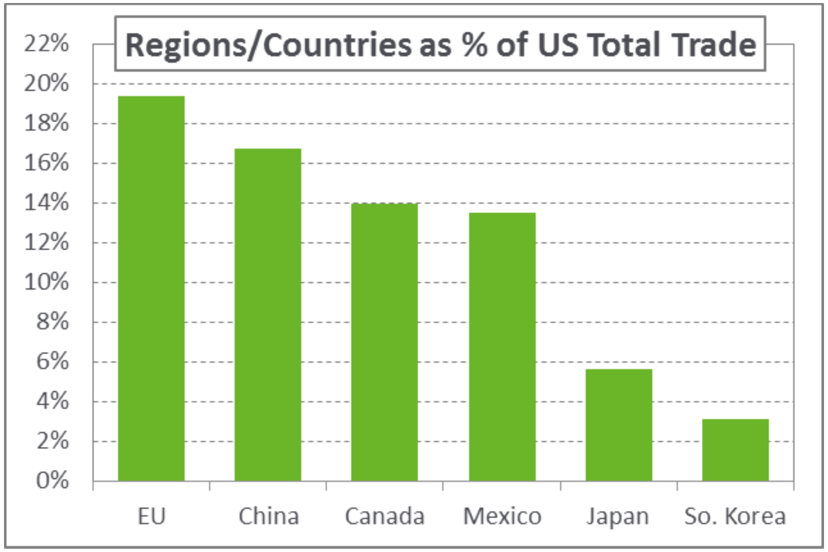
Markets have taken to interpreting the US administration's rhetoric with a grain of salt but ongoing NAFTA negotiations are a concern

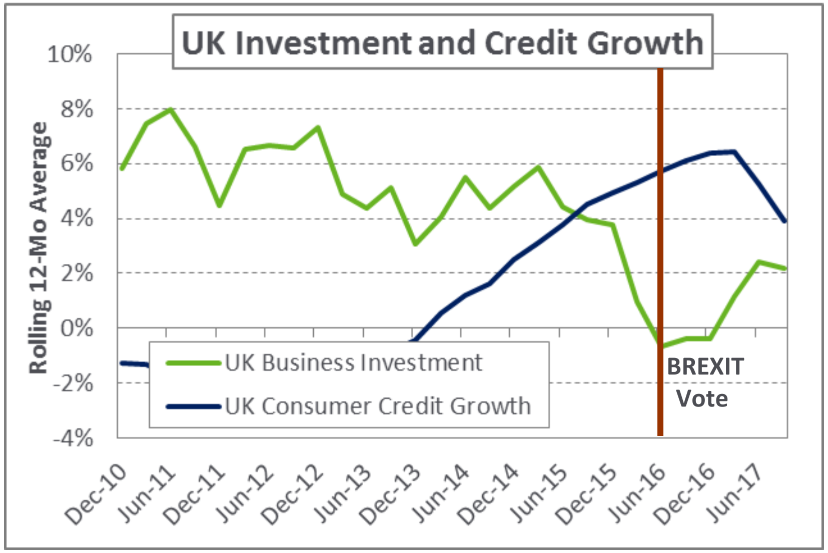
The UK serves as a live case study for the effects of globalization backlash

While it is early in the process, economic metrics across the country have turned lower in the 18 months since UK voted to leave the European Union

Expected disruption to financial regulations, customs controls, and business confidence in the UK are proving to be a cautionary tale for a turn away from globalization

However, the economic unease of voters remain and popularity of anti-establishment political parties poses a risk to the global economic order





Source: (Top) Federal Reserve Bank of St. Louis
Source: (Bottom) Bloomberg

CURRENT OPPORTUNITIES

CURRENT OPPORTUNITIES

Trim US Equity Gains

US stocks have posted strong returns over the last 9 years

US stocks are "priced for perfection" with valuations and profit margins hovering near secular highs despite the recent earnings growth improvement

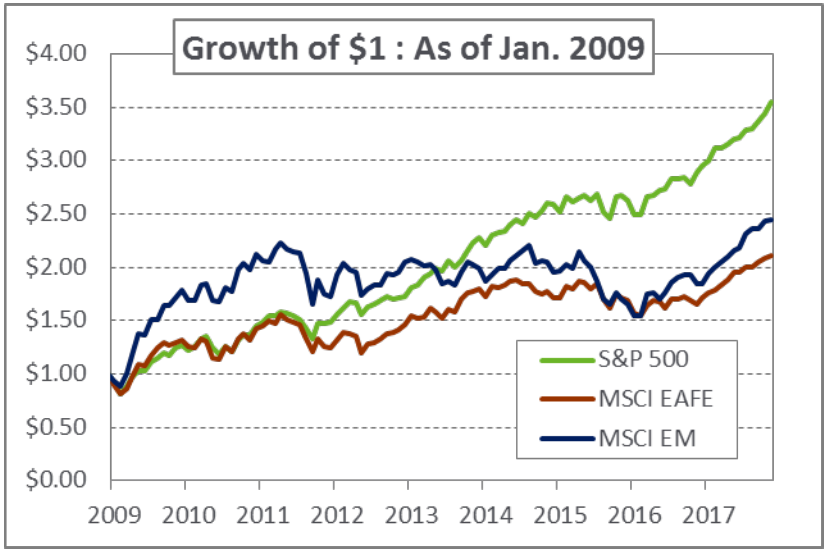
However, a prolonged US economic expansion can continue to support a rally in US equities, specifically small-cap stocks that may benefit from corporate tax cuts

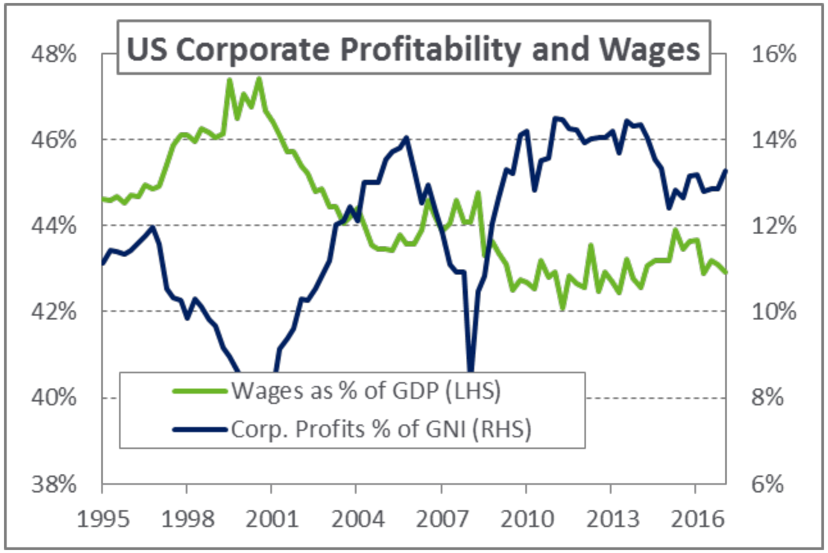
Reduce US large-cap exposure to fund global equity strategies

Opportunity for alpha generation and total return is greater outside the US

US equities are also a viable funding source for private market commitments

Should US equity markets decline materially, look to rebalance to exploit market volatility





Source: (Top) Federal Reserve Bank of St. Louis
Source: (Bottom) S&P, MSCI, Bloomberg

CURRENT OPPORTUNITIES

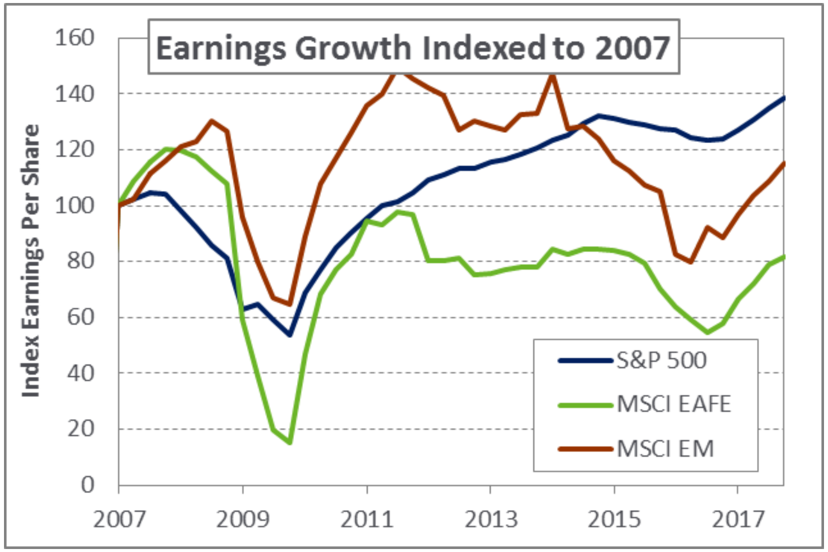
Overweight Non-US Developed Market Equities

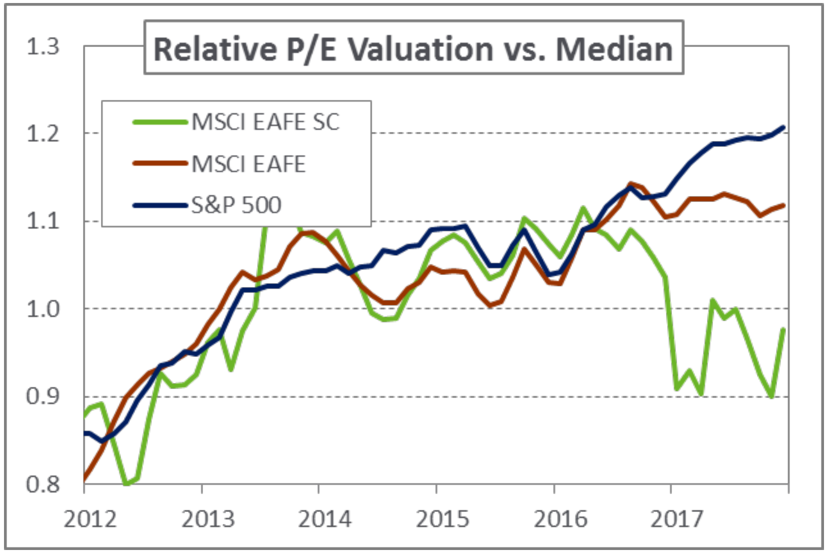
A multi-year earnings recovery in EAFE markets offers the potential for an elevated return

- Catalysts for outperformance are present with improving economic conditions in Europe and continued corporate governance improvements in Japan
- Earnings recovery appears to be taking hold in Europe where an uncertain political outlook has gained clarity

Non-US small cap and global equity are preferred for implementation

- These strategies offer the best opportunity to exploit valuation discrepancies among stocks across countries and sectors
- Hedging a portion of non-US developed currency exposure remains a strategic recommendation





Source: (Top) Bloomberg, NEPC
Source: (Bottom) S&P, MSCI, Bloomberg, NEPC

CURRENT OPPORTUNITIES

Maintain Overweight to Emerging Market Equities

Emerging equities offer the highest total return potential for investors

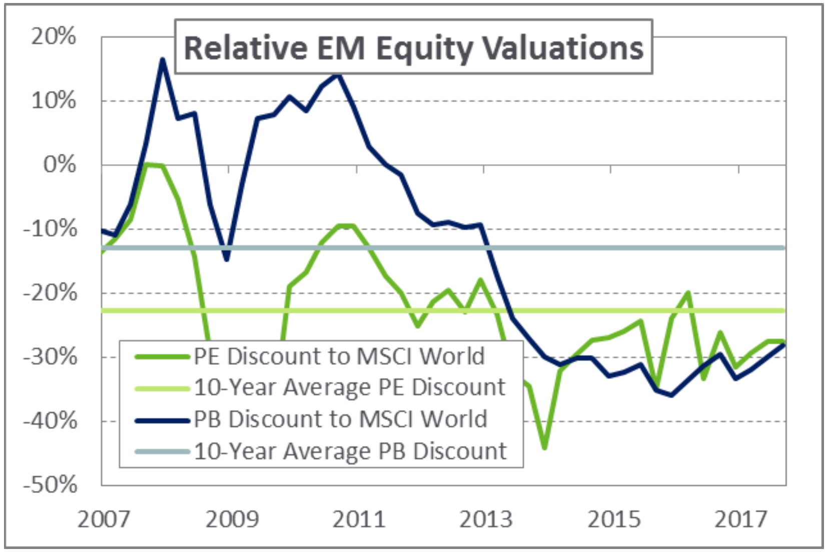
Valuation levels and fundamentals suggest an overweight relative to global equity market cap weights (e.g. 15% to 20%)

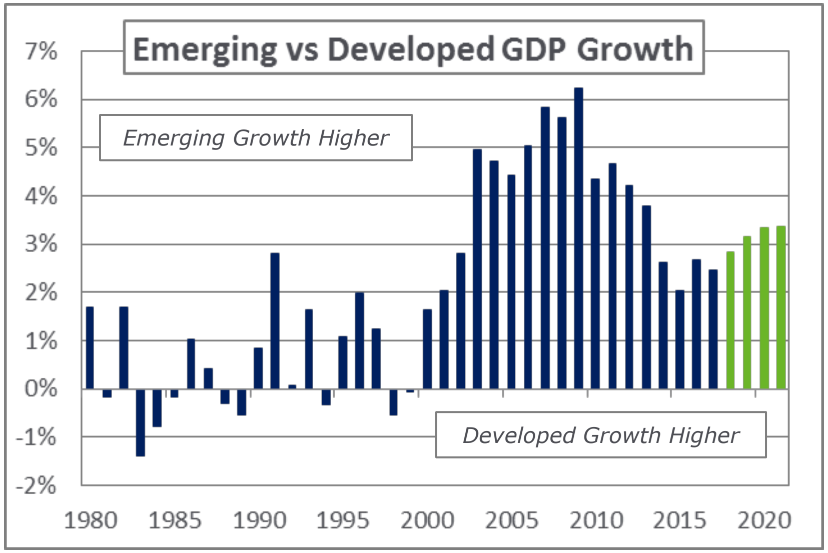
Growth premium relative to the developed world persists as economic conditions in EM improve due to synchronized global growth

High tracking error strategies offer greater flexibility to invest across emerging countries and are preferred to benchmark focused mandates

Opportunity set for excess return appears more abundant in EM versus developed markets

Strategies that invest down the market cap spectrum can offer investors more pure local growth exposure





Source: (Top) MSCI, Bloomberg
Source: (Bottom) IMF

CURRENT OPPORTUNITIES

Allocate to TIPS from Core Bonds

Duration exposure remains a key asset allocation building block for a diversified portfolio

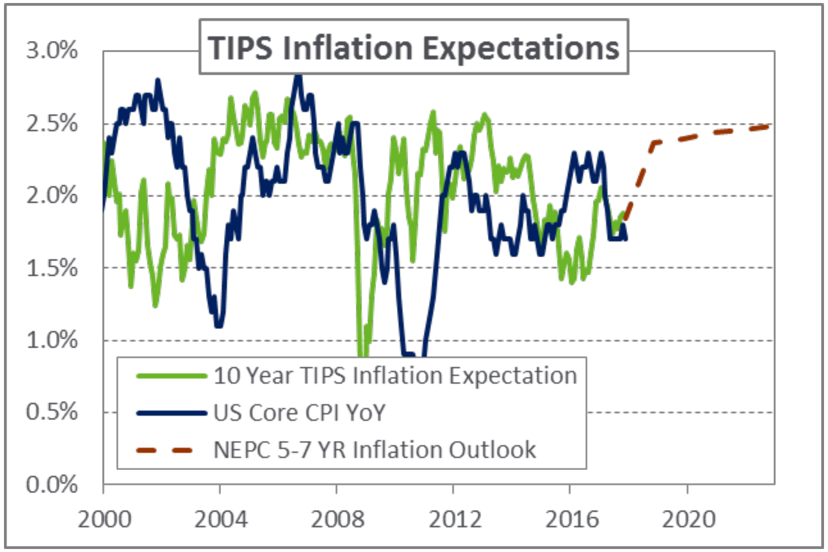
TIPS offer safe haven exposure with an explicit hedge for realized inflation and can be implemented with a low cost passive strategy

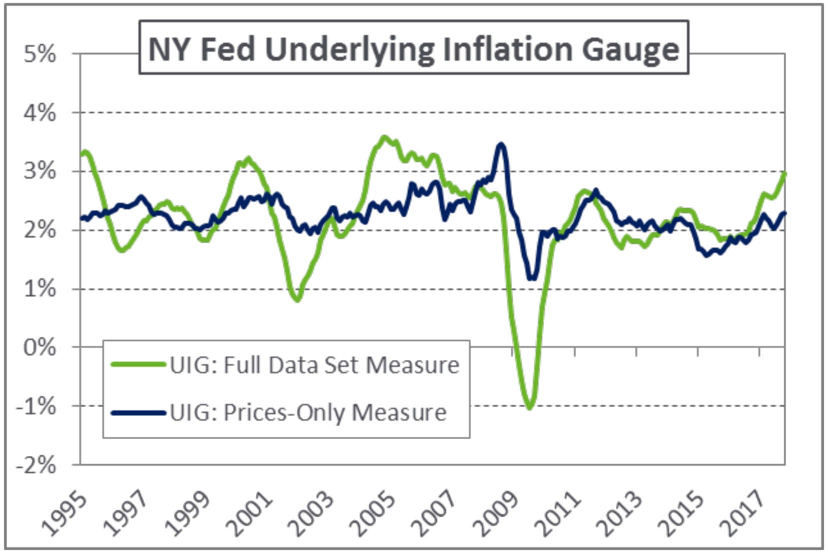
Current core bond yields offer limited cushion before taking on losses in a rising interest rate environment

Increase in inflation expectations would favor TIPS over nominal bonds

TIPS yields are priced off real rates and sensitive to Fed tightening but a gradual path of normalization should mitigate the risk of a sharp rise in real interest rates

An allocation to TIPS diversifies core bond exposure and improves risk balance across economic environments





Source: (Top) Bureau of Labor Statistics, Bloomberg, NEPC
Source: (Bottom) New York Fed

CURRENT OPPORTUNITIES

Reduce Return Seeking Credit Exposure

Over the last 18 months, high yield bonds have provided strong gains

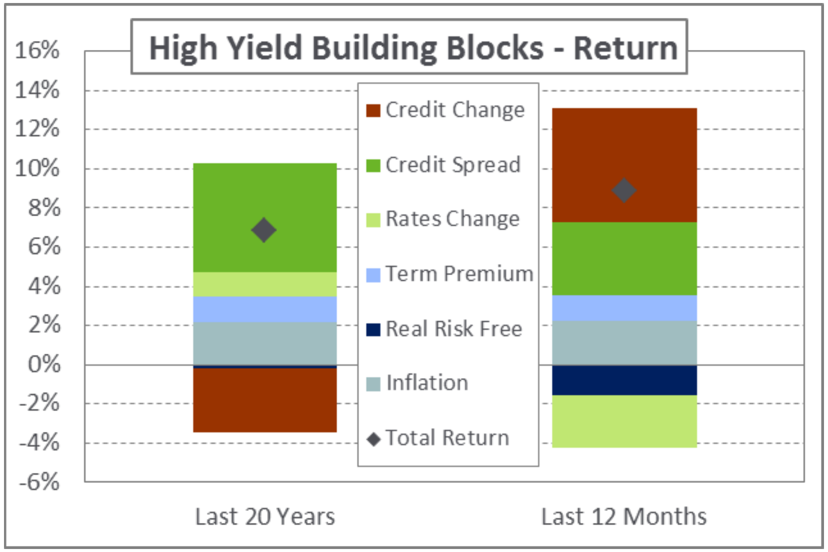
Attractive credit spreads seen in early 2016 have now fallen below historic medians and do not appear to fully compensate investors for the risk

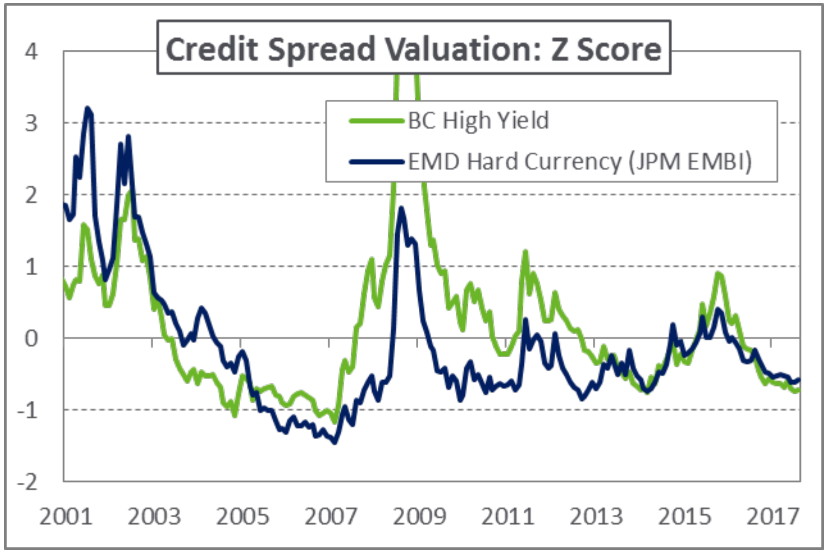
Reallocate gains from liquid credit markets to other areas of the portfolio (e.g. equity, private markets, safe haven fixed income)

Valuations of other credit sectors appear stretched with dollar based EMD also looking expensive

Recommend investors eliminate or reduce dollar-denominated emerging market debt as both sovereign and corporate spreads have tightened

We encourage reallocating the proceeds of dollar based EMD to a smaller mandate in EMD local or moving to other areas of the portfolio (e.g. equity, idiosyncratic credit opportunities)





Source: (Top) MSCI, Bloomberg
Source: (Bottom) IMF

CURRENT OPPORTUNITIES

Fund Emerging Local Debt

EM local debt offers an attractive total return opportunity

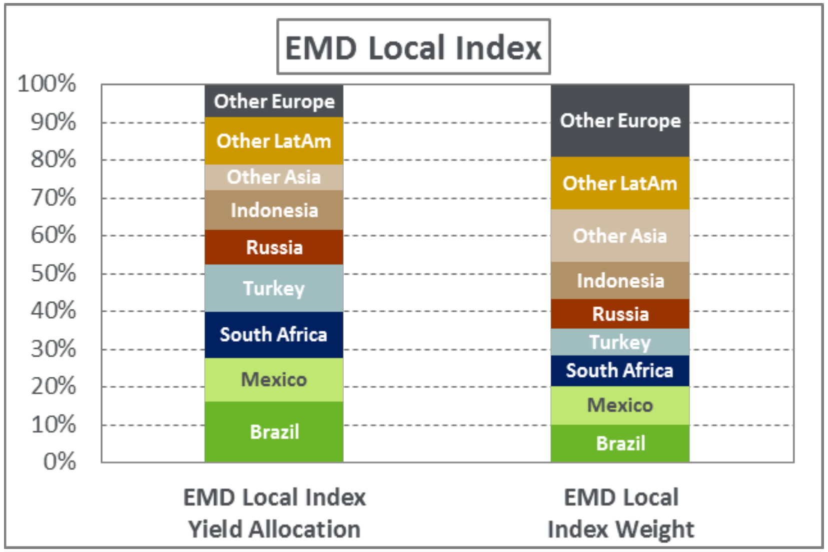
Above average index yield relative to developed world provides a cushion to offset potentially high currency volatility

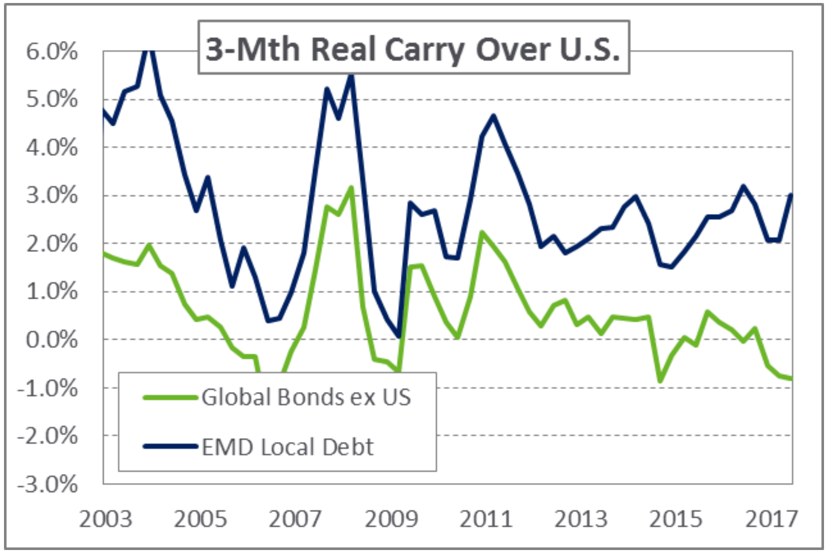
Valuations for many emerging market currencies remain attractive despite recent rally in select markets

For tactically oriented investors, look to fund emerging local debt from high yield and dollar denominated EMD

Preferred implementation is a stand alone EM local debt strategy

For investors with an existing dollar denominated EMD allocation, we encourage shifting the exposure to local currency debt but reduce the exposure size to account for the higher volatility of emerging local currency debt





Source: (Top) JP Morgan
Source: (Bottom) JP Morgan, Bloomberg, NEPC

CURRENT OPPORTUNITIES

Add Macro Hedge Funds

Macro hedge fund strategies offer broad benefits to a total portfolio

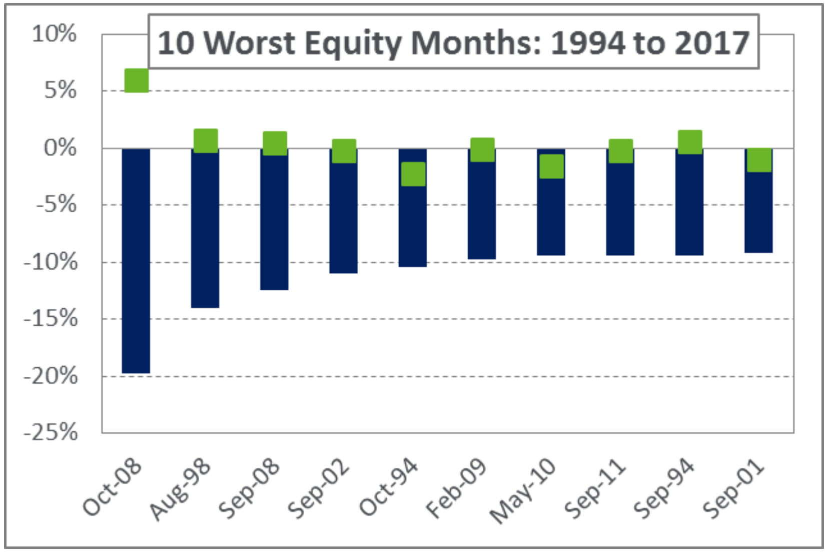
Allocations of size (e.g. 5%) help to mitigate the left-tail of a portfolio return distribution

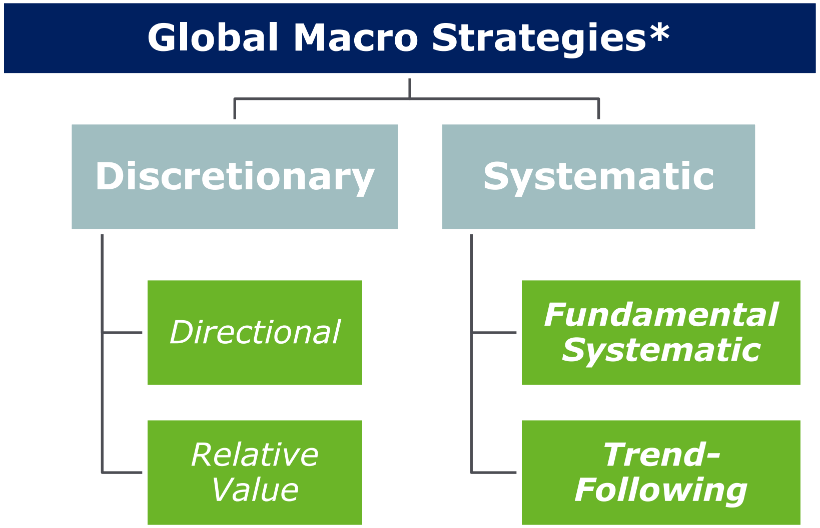
Investors should be targeted in their approach to portfolio construction as manager selection is paramount

Fund systematic global macro from broad based GAA and hedge fund of fund strategies

Systematic strategies tend to exhibit low correlation to equity markets and are strong diversifiers within a total portfolio

Many systematic macro strategies exhibit “crisis alpha” or excess performance in risk-off periods





Source: (Top) eVestment, HFRI

**Not intended to be an all inclusive Macro sub-strategy list*

CURRENT OPPORTUNITIES

Add Long Volatility Exposure

Volatility levels for global markets are near historic lows

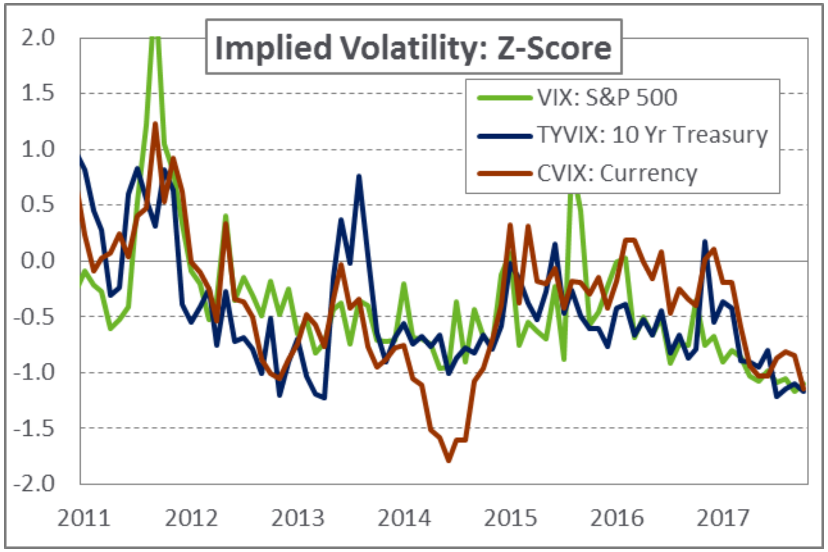
Long volatility exposure positively benefits from rising asset class volatility and an allocation of 1% to 2% can provide a significant return contribution should volatility normalize

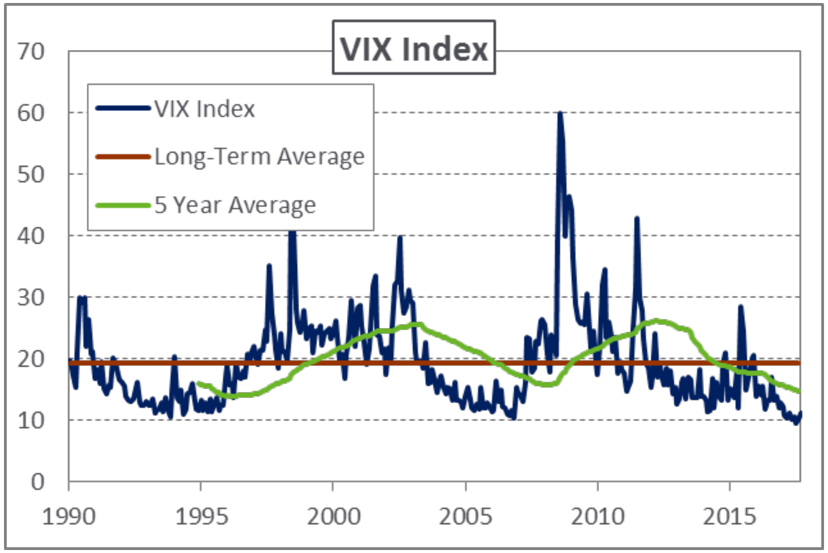
Exposure is not without risk. Losses would be expected if market volatility continues to decline. Discipline of a multi-year time horizon is required should volatility levels move slowly back to normal levels

Long volatility strategies with positive carry are the only implementation option we recommend

Purchasing S&P VIX is a costly method to implement long volatility exposure due to the negative roll yield of the VIX curve

Suited for opportunistic investors and ideally funded from traditional GAA strategies





Source: (Top) Bloomberg
Source: (Bottom) Bloomberg

2018 ASSET CLASS ASSUMPTIONS

2018 ASSET CLASS ASSUMPTIONS

NEPC asset class assumptions offer both an intermediate (5-7 years) and long term (30 years) forecast horizon

- November 30th market data is used for inputs to the asset class models

The 5-7 year return expectations for US credit and equity asset classes are broadly lower due to continued increases in valuation levels

- Credit-based asset class expectations have declined considerably from prior year, with credit spreads moving below long-term medians across most sectors

The outlook for non-US equities remains attractive over 5-7 years supported by improvement in corporate earnings and economic growth

We anticipate US inflation will gradually move higher and average 2.5%

We continue to refine and enhance our process where appropriate

- The asset class assumption for Real Estate has been split into Core and Non-Core to offer a distinction between the volatility and return profile

- Core has a greater income orientation with broad exposure to commercial real estate beta and Non-Core is oriented to capital appreciation with increased use of leverage

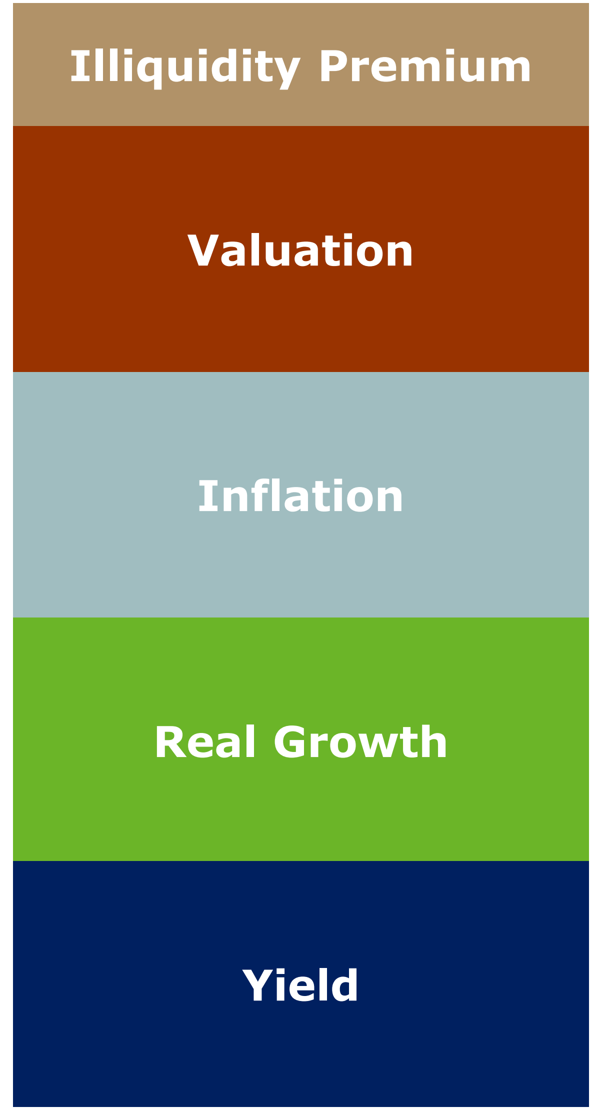
BUILDING BLOCKS METHODOLOGY

Forward-looking asset class models incorporate current and forecasted market and economic data to inform expected returns

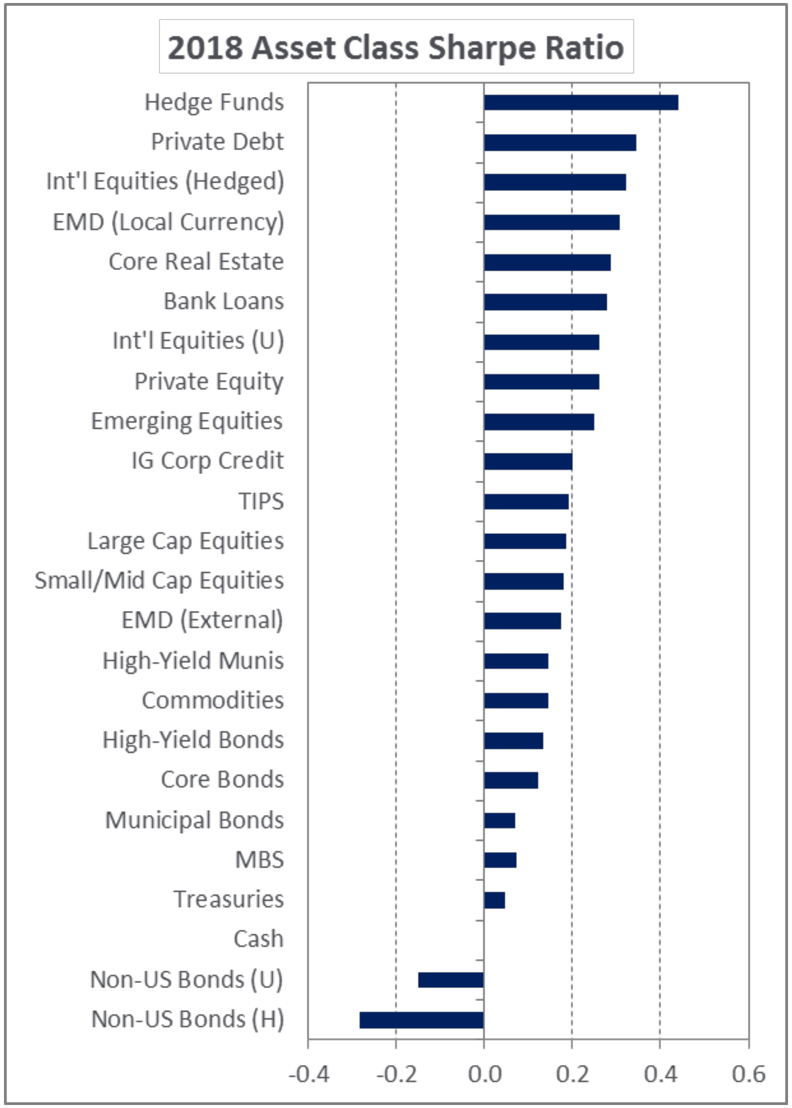
Quantitative inputs combined with qualitative factors and investor sentiment (capital flows, etc.) drive the 5 to 7 year return outlook

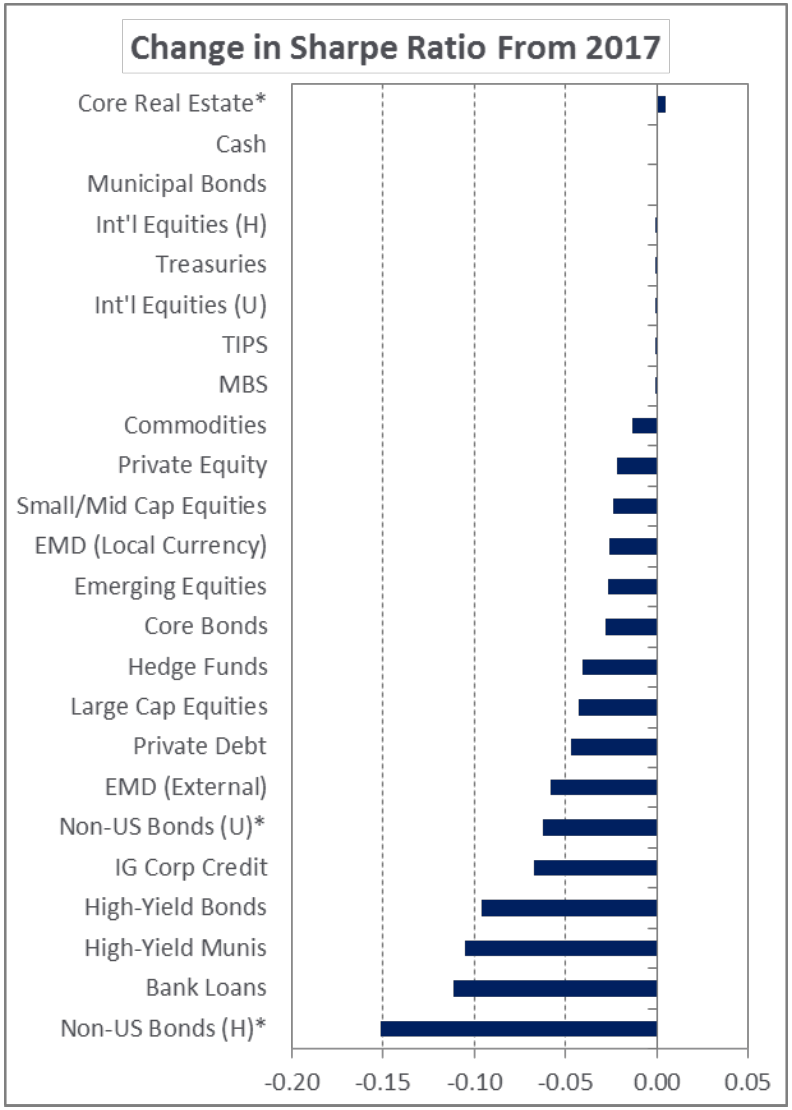
Components are combined to capture core drivers of return across asset classes – forming the foundation of our building blocks framework

Building blocks will vary across equity, credit, and real assets



RELATIVE ASSET CLASS ATTRACTIVENESS





Source: NEPC

**Impacted by methodology changes for Core Real Estate (reduction in volatility) and Non-US Bonds (formerly was Global Bonds)*

MACRO ASSUMPTIONS

INFLATION OVERVIEW

Inflation is an integral component of our asset allocation assumptions

Represents an essential building block for developing asset class returns

Inflation building blocks are model driven and informed by multiple sources for both the US and global asset classes

Includes forecasts from international organizations (e.g. IMF), local consumer and producer price indices, break-even inflation expectations, and global interest rate curves

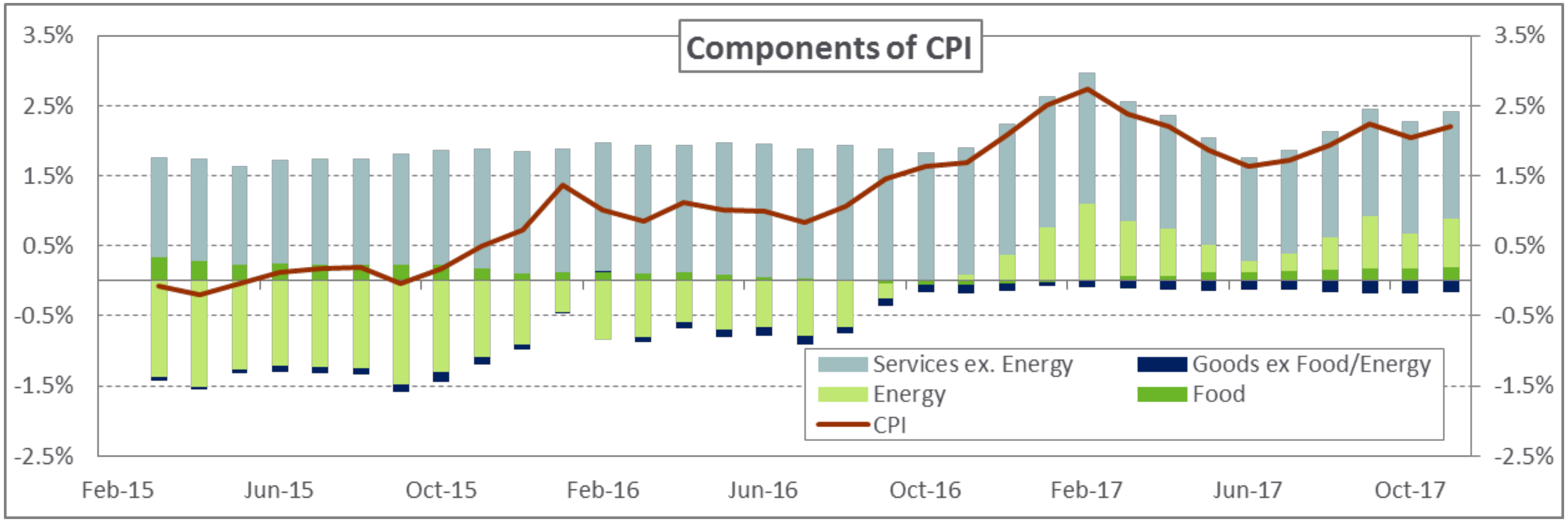
US inflation is based upon the TIPS breakeven inflation curve adjusted for expectations of economic activity, employment, and capacity levels

Global inflation expectations are informed by consensus forecasts across countries along with implied inputs from global bond curves

The 30 year global inflation forecast assumes purchase power parity holds across the globe and country specific inflation levels converge to a terminal value

Region	5-7 Year Inflation Assumption	30-Year Inflation Assumption
United States	2.50%	2.75%
Global	3.00%	3.25%

US INFLATION



Source: Bloomberg, NEPC

Low inflation continued throughout 2017 despite strong economic growth, tightening labor market, and early signs of wage gains

These metrics were thought to help inflation accelerate, yet the Fed's 2% inflation target has been a difficult target for the US economy to maintain

A seemingly transitory drop in certain CPI elements, such as healthcare costs and vehicles, have minimized price pressures in 2017 even as the impact from energy prices has turned positive

The Fed's preferred inflation measure, the personal consumption expenditures (PCE), remains below their 2% target

However, other more inclusive indicators such as the NY Fed Underlying Inflation Gauge, point to an increase in inflation in the coming years, but still below the long-term average

GLOBAL INFLATION

In most developed economies, core inflation has failed to reach or exceed central bank targets despite improved domestic demand and labor markets

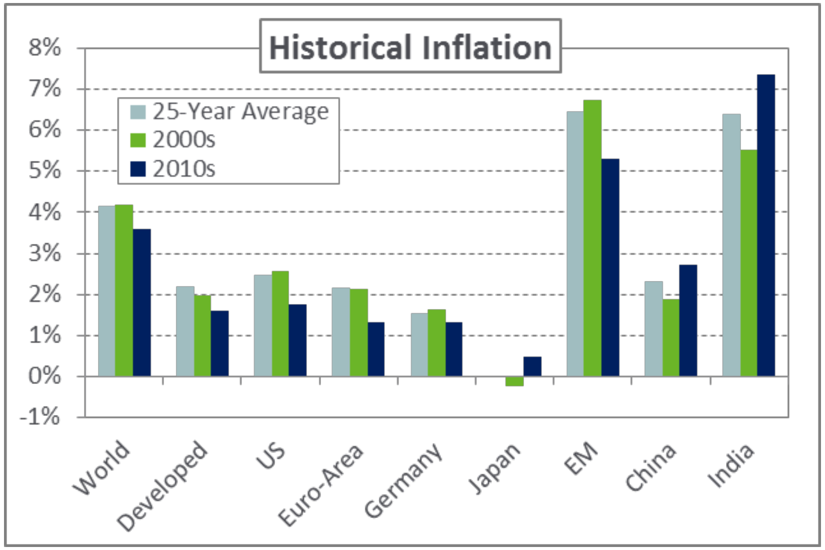
Ultra accommodative monetary policy remains in place for Europe and Japan to fuel higher levels of inflation

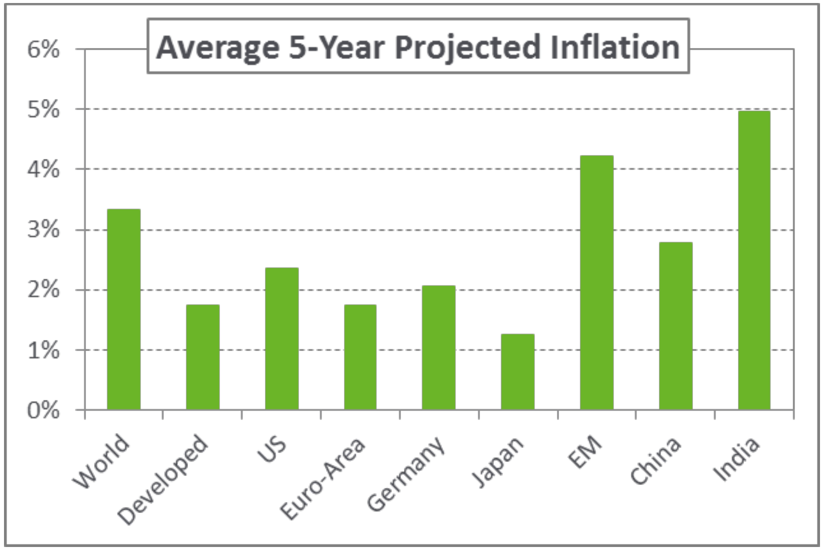
The UK is an exception to this trend as significant depreciation of the pound has led to higher consumer prices

Emerging market inflation has broadly declined over the last 24 months

This is in part due to the large fiscal correction and prudent monetary policy actions that followed the currency declines of prior years

Core inflation particularly in Russia and Brazil have declined significantly as the effect of high real interest rates weakens inflationary trends





Source: (Top) IMF, NEPC
Source: (Bottom) IMF, NEPC

US CASH EXPECTATIONS

Cash is the basic cornerstone of all asset class forecasts

The assumption flows through as a direct building block component or as a relative value adjustment (cash + risk premia)

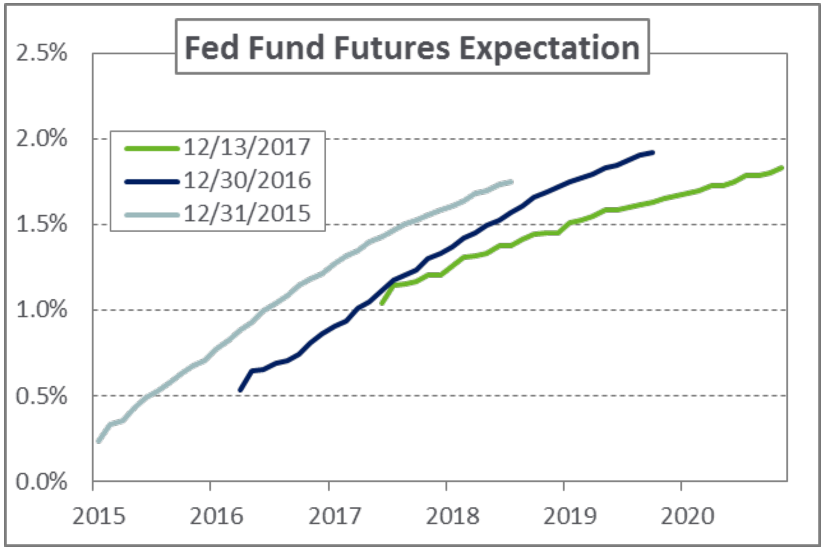
The longer-term cash assumption is a result of the inflation assumption in conjunction with our forecasted real interest rate path

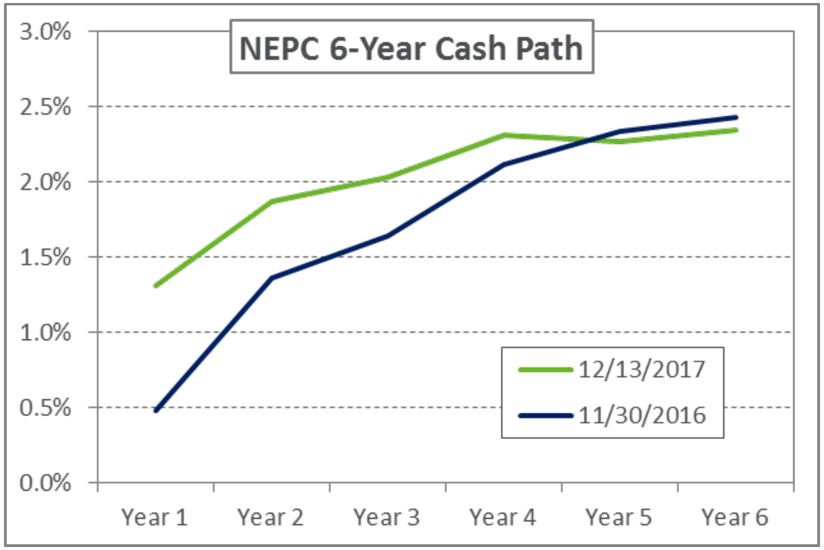
After three Fed rate hikes in 2017, expectations for increased short term interest rates project higher still

A progressively flatter yield curve has formed as longer-term rate expectations remain muted

Market prices reflect only two rate hikes in 2018, despite FOMC expectations of three

A key risk to our overall investment outlook is the ending of Fed gradualism and rate increases beyond market expectations





Source: (Top) Bloomberg
Source: (Bottom) Bloomberg, NEPC
Charts as of 12/13/2017

US INTEREST RATE EXPECTATIONS

Real yields are marginally higher relative to last year

Continued strength in economic data and expectation of future Fed rate hikes have improved the outlook for real yields

While higher, real rates remain below long-term averages, reinforcing the subdued outlook for fixed income

Long-term expectations for real yields remain positive but low in the US

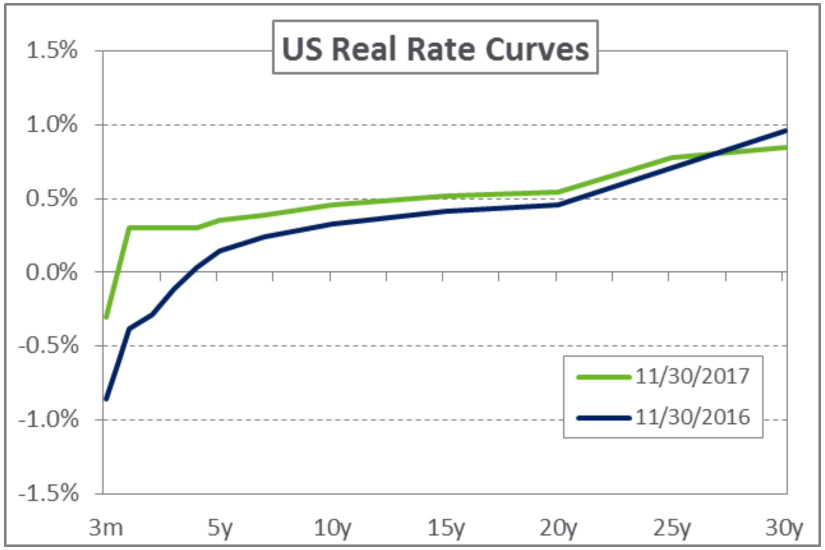
Low real rates depress the return outlook for risk assets over the long-term

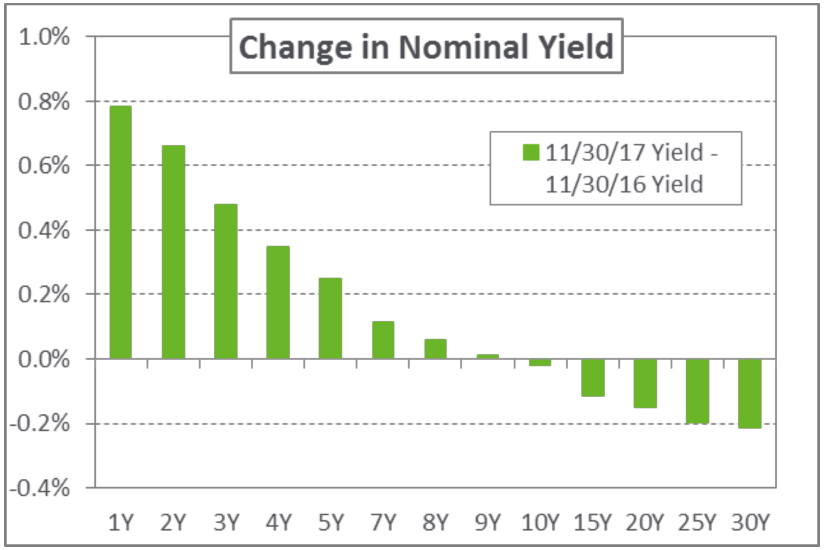
Interest rate increases have been slower than what the market has discounted

Additional uncertainty surrounding the path of rates is possible in 2018

Potential disruption with the confirmation of new Fed Chairman Jerome Powell

Tax cuts could push interest rates higher due to the larger federal deficits and debt issuance needs





Source: (Top) Bloomberg, NEPC
Source: (Bottom) Bloomberg

GLOBAL INTEREST RATE EXPECTATIONS

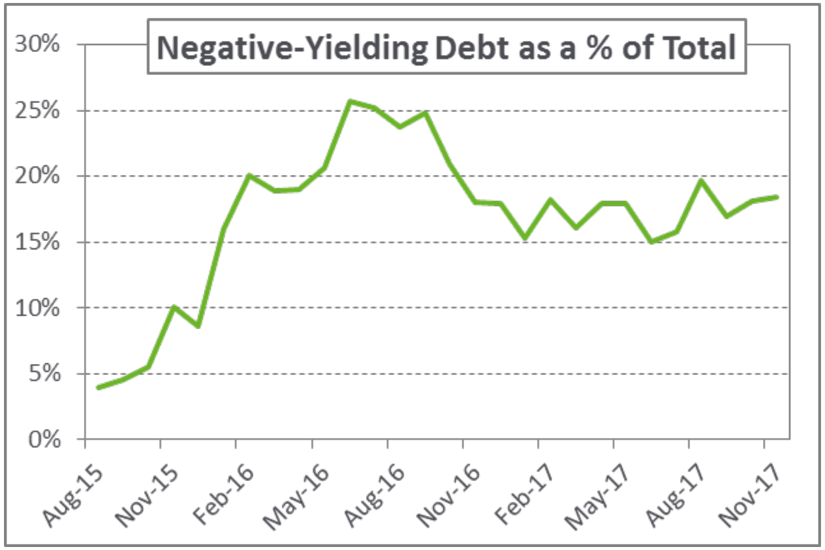
Government bond yields remain low and negative in much of the developed world

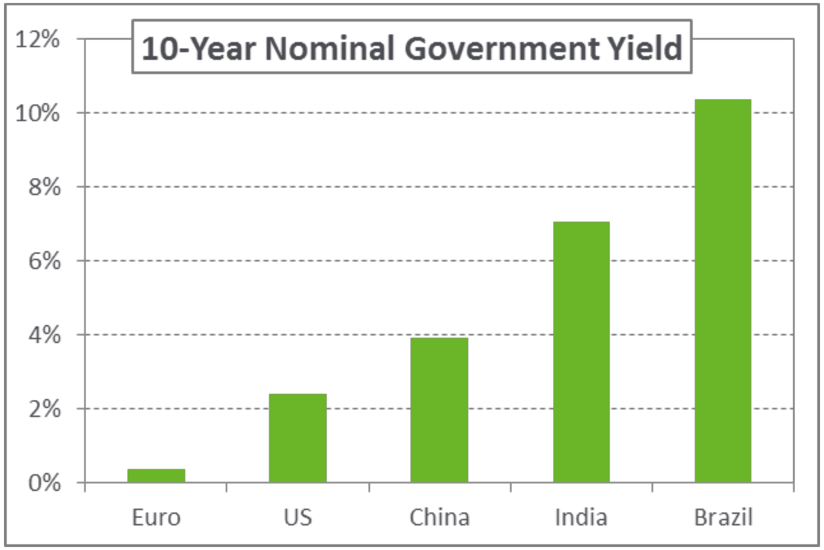
European sovereign yields have declined relative to Germany as political and economic risk declines

- Spain and other periphery nations have showed positive economic momentum
- France's election of Emmanuel Macron was seen as a stabilizing event for the country and the EU as a whole

Emerging market local interest rates are attractively priced as real yields remain elevated

- Emerging market yields continue to retain a healthy premia over developed world rates
- Additionally, positive real rates provide a larger cushion for EM central banks to cut interest rates and ease monetary conditions





Source: (Top) Bloomberg
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EQUITY ASSUMPTIONS

EQUITY: ASSUMPTIONS

Equity Building Blocks	
Illiquidity Premium	The additional return expected for investments carrying liquidity risk
Valuation	An input representing P/E multiple contraction or expansion relative to long-term trend
Inflation	Represents market-specific inflation derived from index country revenue contribution and region-specific forecasted inflation
Real Earnings Growth	Reflects market-specific real growth for each equity asset class as a weighted-average derived from index country revenue contribution and forecasted GDP growth
Dividend Yield	Informed by current income distributed to shareholders with adjustments made to reflect market conditions and trends

Asset Class	5-7 Year Return	Change 2018-2017
US Large Cap	**5.25%**	**-.50%**
US Small/Mid-Cap	**5.75%**	**-.25%**
International (Unhedged)	**7.50%**	**+.25%**
International (Hedged)	**7.82%**	**+.25%**
International Small Cap	**7.75%**	**+.25%**
Emerging International	**9.00%**	**-.50%**
Emerging Intl. Small Cap	**9.25%**	**-.75%**
Private Equity	**8.00%**	**-.25%**
Hedge Funds – Long/Short	**6.25%**	**-**
Global Equity	***6.88%***	***-.33%***

EQUITY: REAL EARNINGS GROWTH

Global growth was stronger than expected during 2017

Synchronized global growth is likely to persist with continued favorable market growth conditions

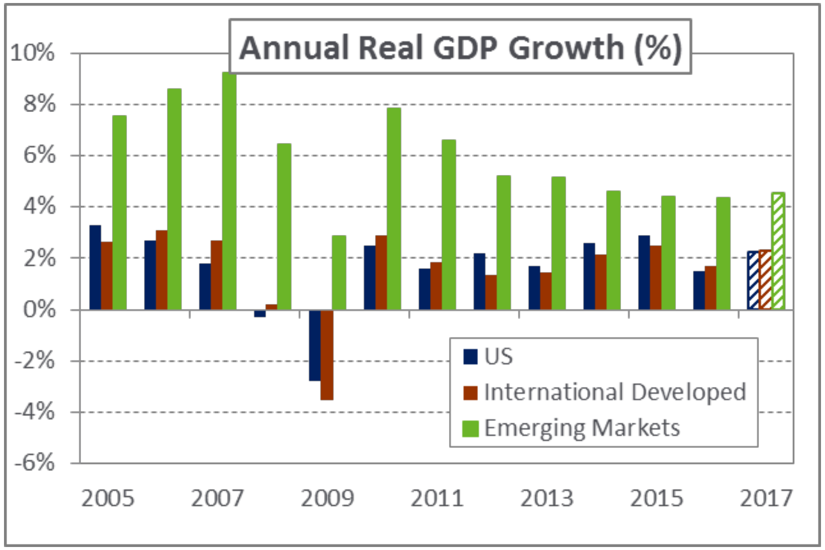
The broad outlook for developed economies has improved as a real earnings recovery has begun

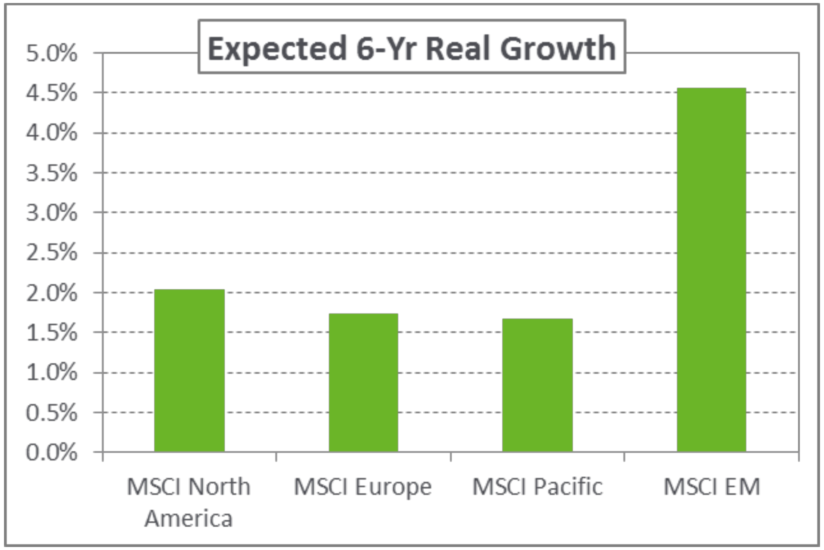
The UK remains a notable outlier as the country continues sorting through Brexit

Emerging economies are broadly expected to continue strong growth

Chinese real growth is expected to slow in future years as the country transitions to a more consumer based economy

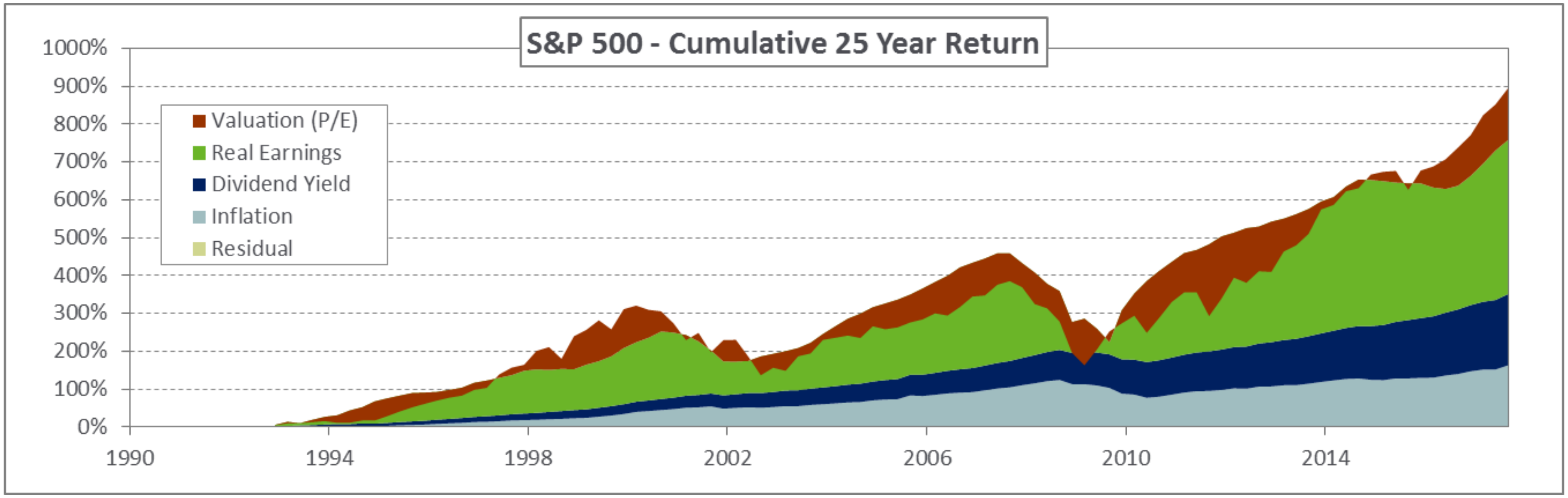
Reforms in India and southeast Asia are expected to boost investment, productivity, and per-capita growth





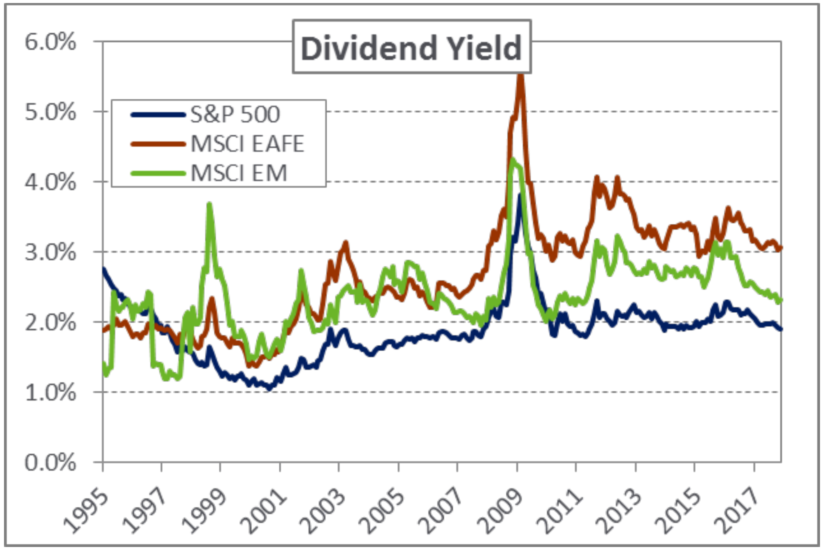
Source: (Top) Bloomberg, NEPC
Source: (Bottom) IMF, MSCI, Bloomberg

EQUITY: DIVIDEND YIELD



Real dividends per share have increased over time, but prices have increased at a faster rate, leading to falling yields

International and Emerging Markets continue to offer a more attractive dividend yield relative to the US



Source: (Top) S&P, NEPC, Bloomberg
Source: (Bottom) S&P, MSCI, Bloomberg

EQUITY: VALUATION

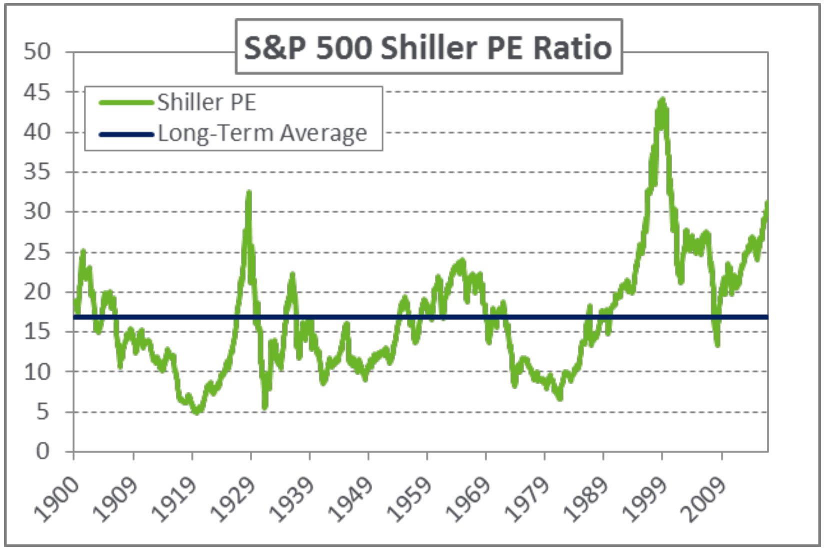
Global equities broadly pushed higher in 2017 supported by macroeconomic data, robust earnings, and easy financial conditions

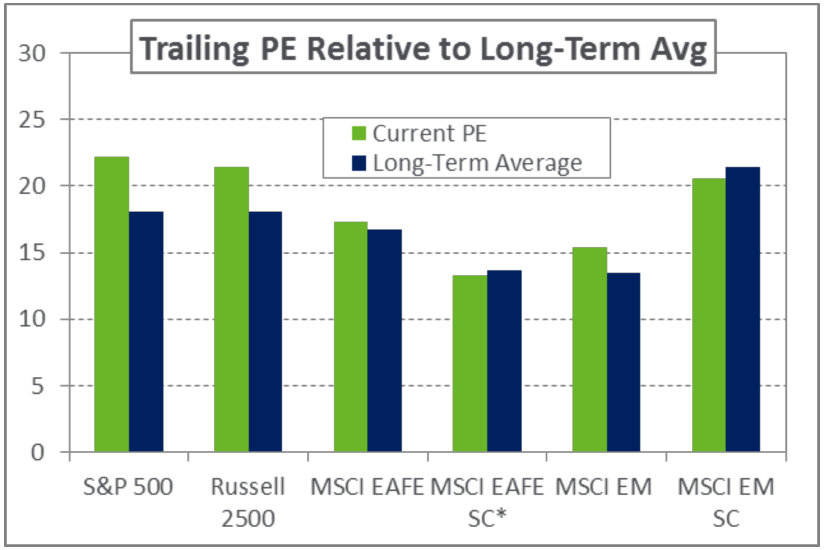
- While earnings growth in the US came in stronger than expected, price gains continued to outpace – leading to further P/E multiple expansion

Recovering corporate earnings for international developed markets have allowed valuations to remain relatively attractive

- A multi-year earnings recovery in Europe and Japan offers the potential for an elevated return in these markets

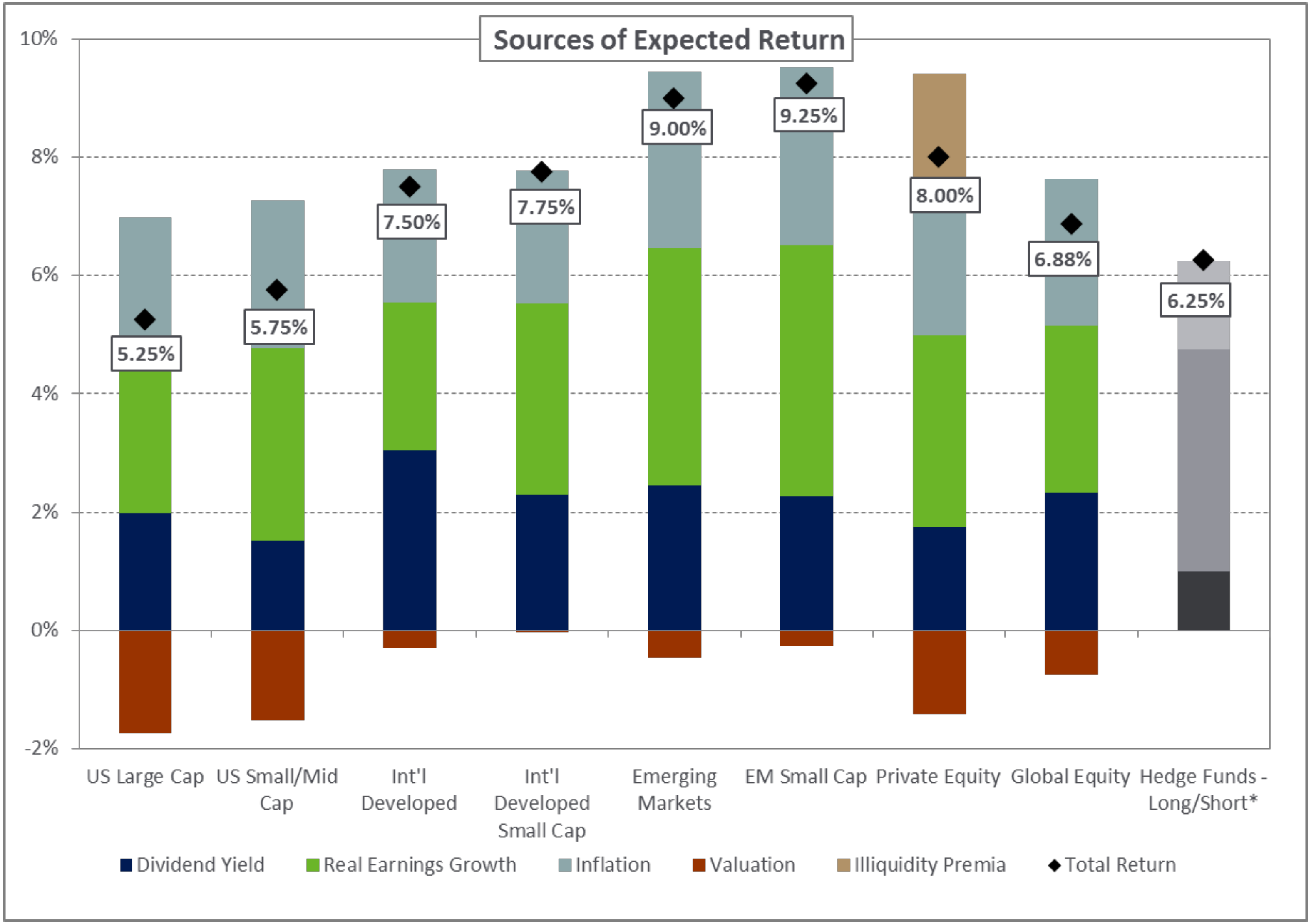
While emerging market equities posted the strongest gains for 2017, valuations remain close to long-term averages relative to domestic markets





Source: (Top) S&P, Shiller
Source: (Bottom) S&P, Russell, MSCI, Bloomberg
**Reflects index-adjusted positive P/E values*

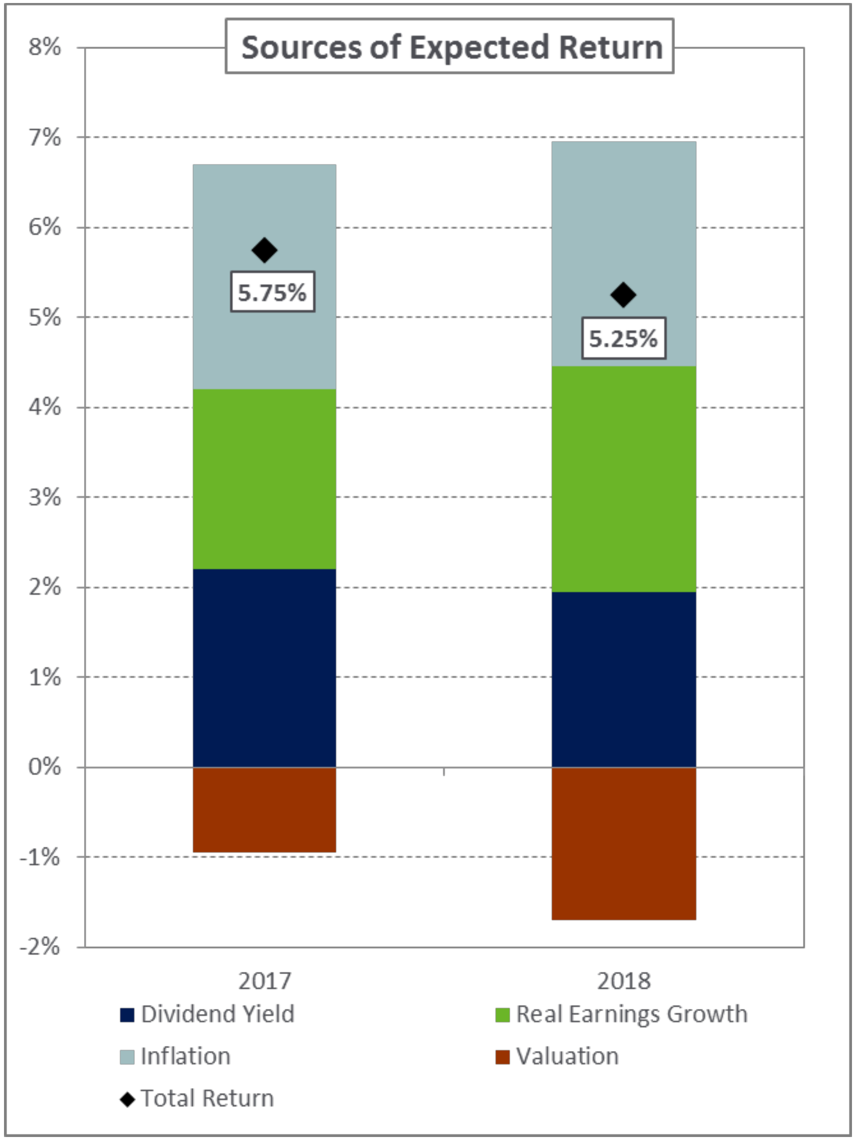
EQUITY: BUILDING BLOCKS



Source: NEPC

**Hedge Funds are discussed in detail in the Multi-Asset section*

EQUITY EXAMPLE: LARGE CAP US EQUITY



- **Relative to 2017, the 2018 building blocks incorporate:**
  - Modestly higher growth to reflect strength in global growth
  - A more significant valuation adjustment to reflecting multiple expansion
- **Despite only a 50 basis point reduction in the 5-7 year outlook, more generous assumptions were applied:**
  - Profit margins are assumed to remain near current elevated levels
  - Assumed P/E multiple is expected to mean revert half way to the long-term average

RATES & CREDIT ASSUMPTIONS

RATES & CREDIT: ASSUMPTIONS

Rate & Credit Building Blocks	
Illiquidity Premium	The additional return expected for investments carrying liquidity risk
Government Rates Price Change	The valuation change resulting from a change in the current yield curve to forecasted rates
Spread Price Change	The valuation change resulting from a change in credit spreads over the duration of the investment and highly sensitive to economic cycles
Credit Deterioration	The average loss for credit securities associated with an expected default cycle and recovery rates
Credit Spread	Additional yield premium provided by securities with credit risk
Government Rates	The yield attributed to sovereign bonds that do not have credit risk associated with their valuation

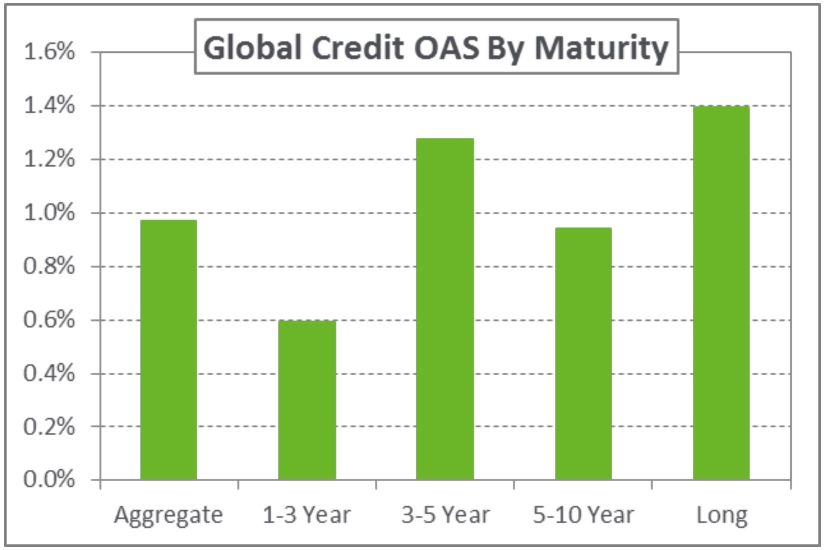
Asset Class	5-7 Year Return	Change 2018-2017
Treasuries	**2.25%**	**+.25%**
Investment-Grade Corporate Credit	**3.50%**	**-.25%**
Municipal Bonds	**2.50%**	**+.25%**
TIPS	**3.25%**	**+.25%**
High-Yield Bonds	**3.75%**	**-1.00%**
High-Yield Municipal Bonds	**3.75%**	**-.50%**
Bank Loans	**4.50%**	**-.75%**
Global Bonds (Unhedged)	***1.17%***	***+.17%***
EMD (External)	**4.25%**	**-.50%**
EMD (Local Currency)	**6.00%**	**-.75%**
Private Debt	**6.50%**	**-.75%**
Core Bonds	***2.75%***	***+.10%***

RATES & CREDIT: CREDIT SPREAD

Strong global growth and yield-seeking investor behavior has compressed credit spreads

Economic growth usually translates to tighter credit spreads due to a lower probability of defaults

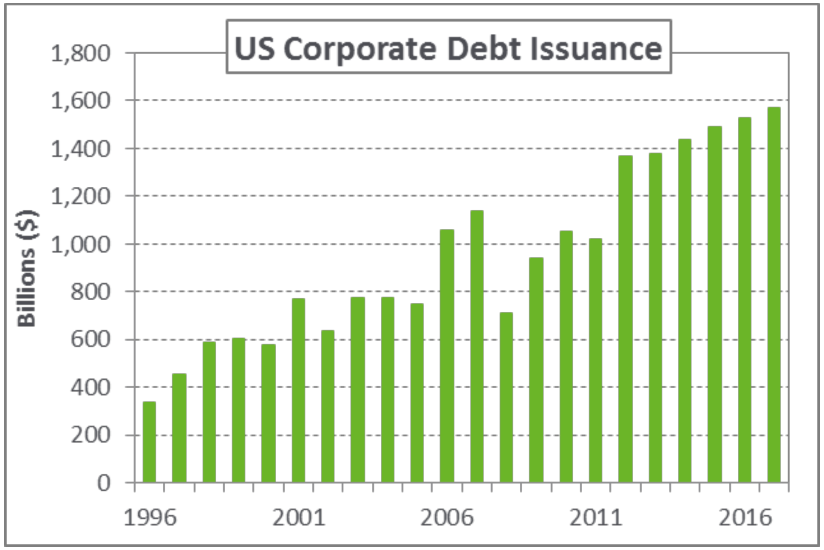
In Europe, the ECB's decision to include corporate bonds in its quantitative easing program has also contributed to smaller credit risk premiums globally



Low borrowing costs have encouraged record issuance in both investment grade and high yield bonds

Passive ownership of credit has increased significantly, even with a larger denominator

The outlook for US credit is subdued with limited return opportunities as credit spreads trade below long-term medians



Source: (Top) Barclays, Bloomberg
Source: (Bottom) SIFMA

RATES & CREDIT: RATES PRICE CHANGE

Rates price change include changes in the level of interest rates, changes to the shape of the curve, and roll down

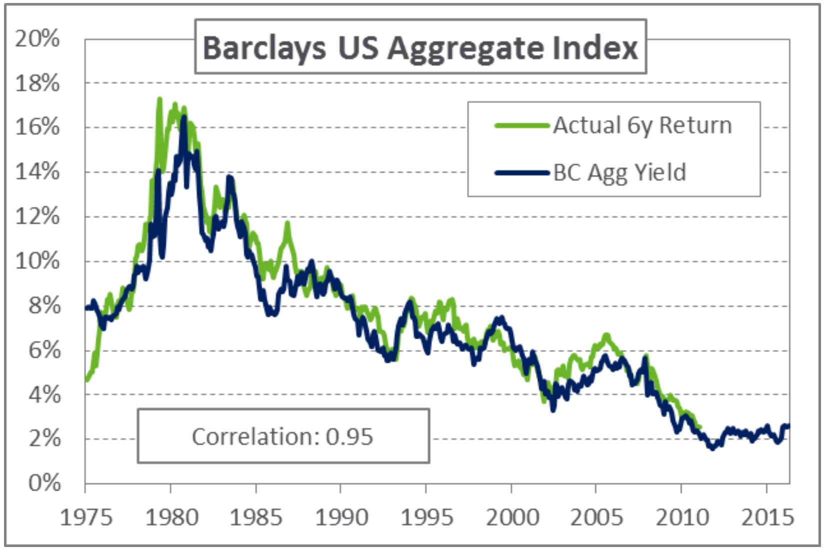
Roll down refers to expected price change due to aging of a bond along the curve

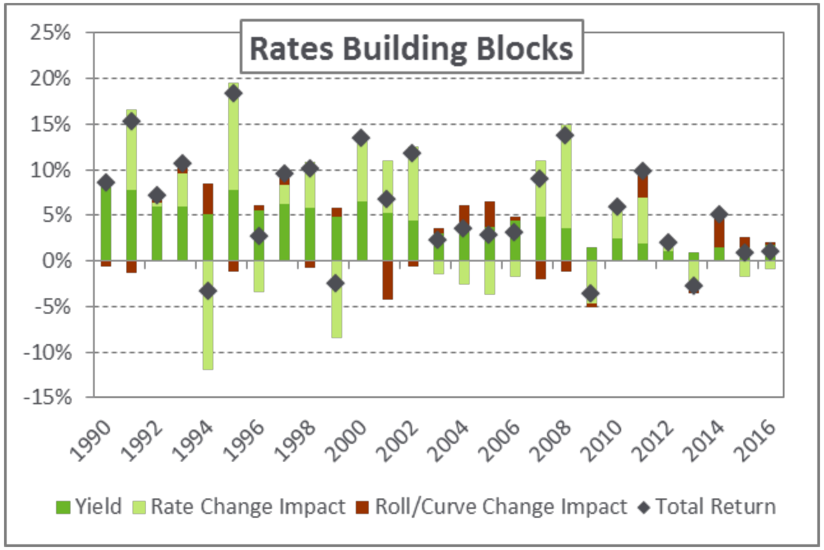
Rate change impact often dominates total return and is a likely detractor in the coming cycle, given expectations of modestly higher rates

Path of interest rates for each market is tied to both central bank actions and inflation expectations

Roll down offers some relief to rising rates when yield curves are steep

As yield curve flattens this can be a drag, pushing investors to shorter duration bonds





Source: (Top) Barclays, Bloomberg, NEPC
Source: (Bottom) Barclays, Bloomberg, NEPC

RATES & CREDIT: SPREAD PRICE CHANGE

Credit spreads continued to tighten throughout the year and remain below long-term averages

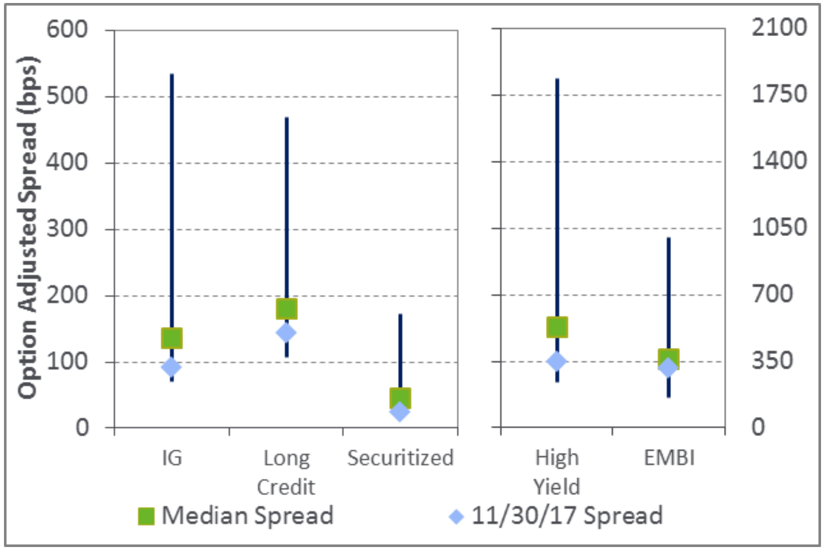
With positive economic indicators and strong technicals, spreads could grind lower

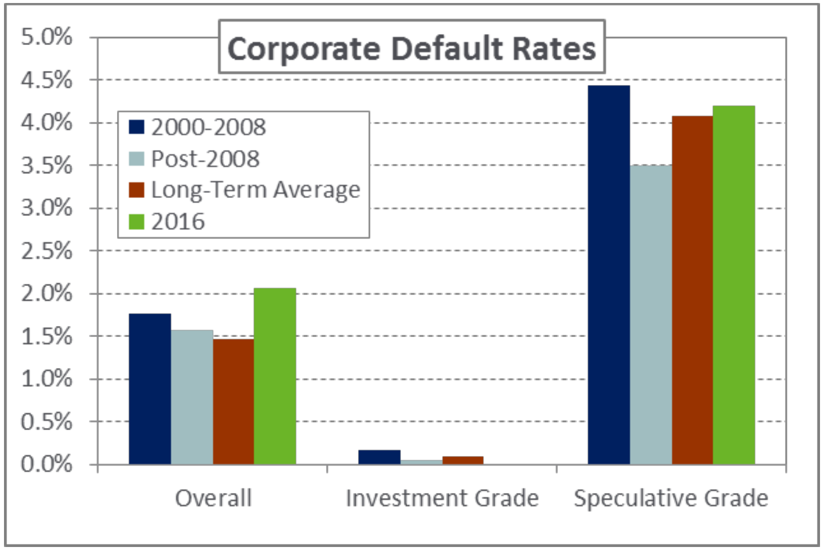
The number of defaults increased last year as a result of the depressed energy and natural resources sector

Over 50% of credit defaults occurred within the energy sector

Nearly all other sectors experienced default rates well below long-term averages

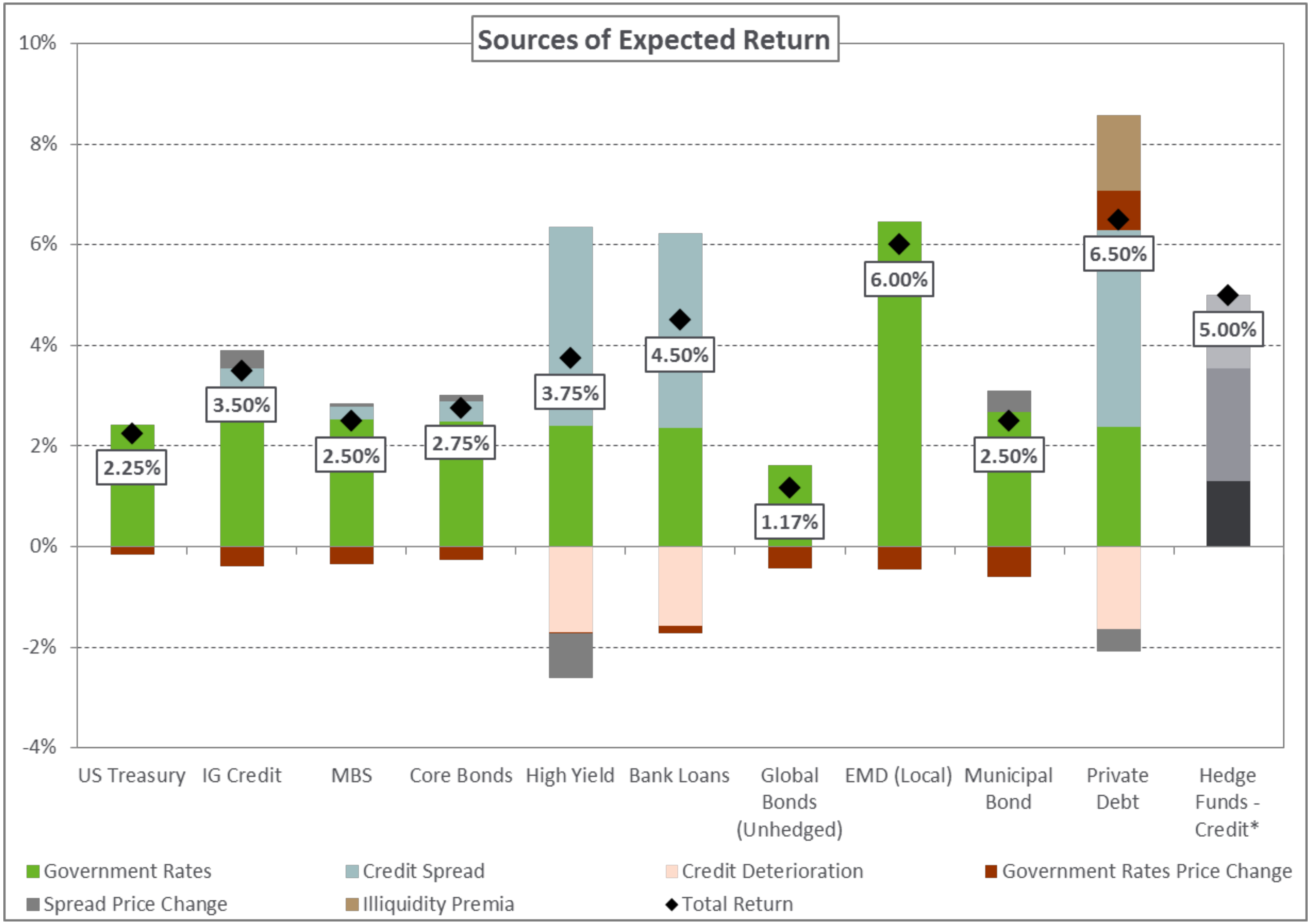
Credit spreads near historic lows suggest investors are receiving less compensation for taking on risk





Source: (Top) JPM, Bloomberg, NEPC. As of 01/31/2000
Source: (Bottom) S&P, NEPC

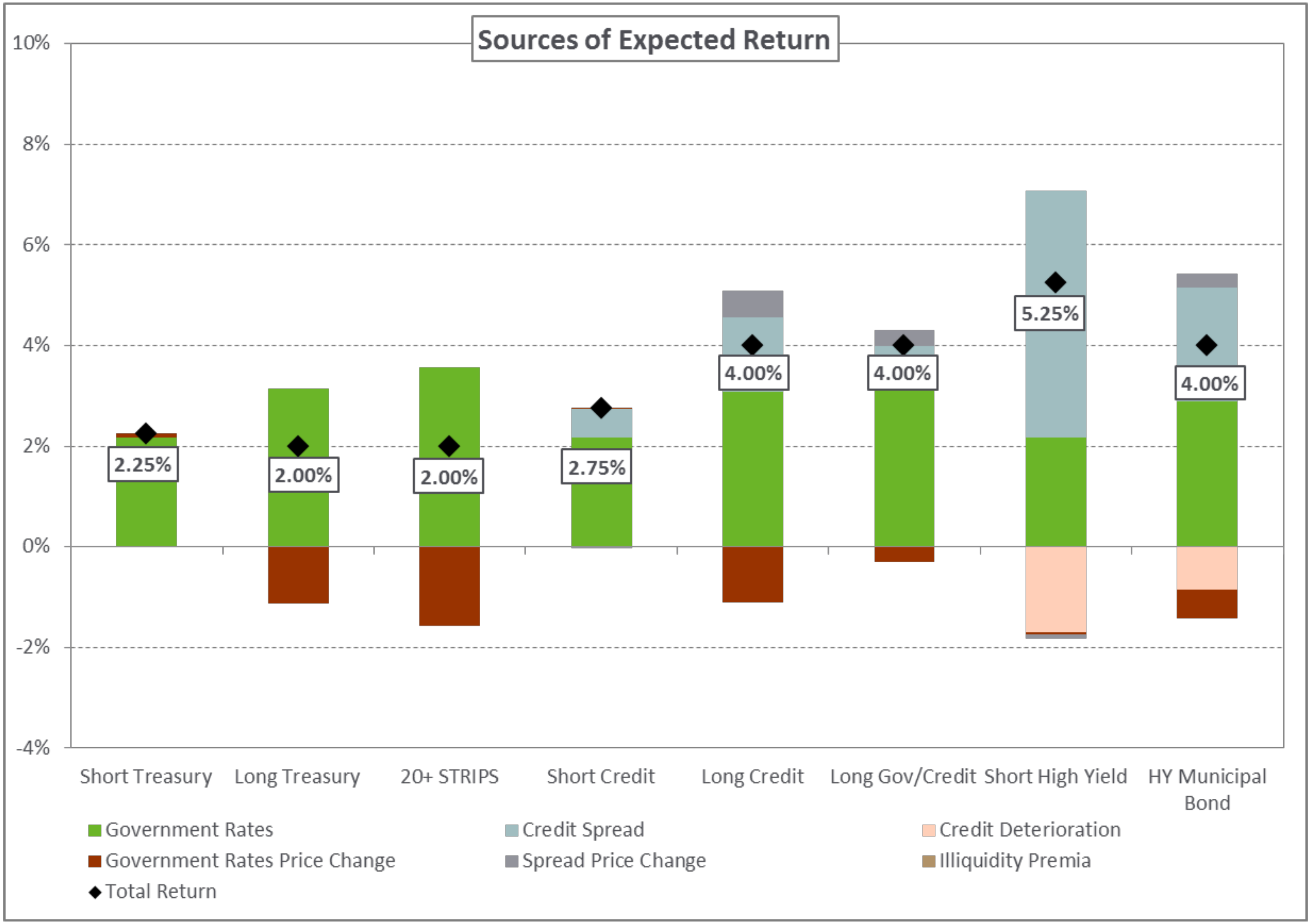
CREDIT: BUILDING BLOCKS



Source: NEPC

**Hedge Funds are discussed in detail in the Multi-Asset section*

CREDIT: BUILDING BLOCKS



Source: NEPC

REAL ASSETS ASSUMPTIONS

REAL ASSETS: ASSUMPTIONS

Real Assets Building Blocks	
Illiquidity Premium	The additional return expected for investments carrying liquidity risk
Valuation	The expected change in price of the underlying asset reverting to a long-term real average or terminal value assumption
Inflation	Incorporates the inflation paths as defined by TIPS breakeven expectations and NEPC expected inflation assumptions
Real Earnings Growth	Reflects market-specific real growth for each equity asset class as a weighted-average derived from index country revenue contribution and forecasted GDP growth
Real Income	Represents the inflation-adjusted income produced by the underlying tangible or physical asset

Asset Class	5-7 Year Return	Change 2018-2017
Commodities	**4.75%**	-
MLPs	**7.25%**	**+.25%**
REITs	**6.50%**	-
Core Real Estate	**5.75%**	**-.25%**
Non-Core Real Estate	**7.00%**	**N/A**
Private Real Assets: Energy/Metals	**8.00%**	**-.25%**
Private Real Assets: Infrastructure/Land	**6.00%**	-
Real Assets (Liquid)	***5.87%***	***-.05%***

REAL ASSETS: REAL INCOME

Equity-like investments: Real income represents the inflation-adjusted dividend yield

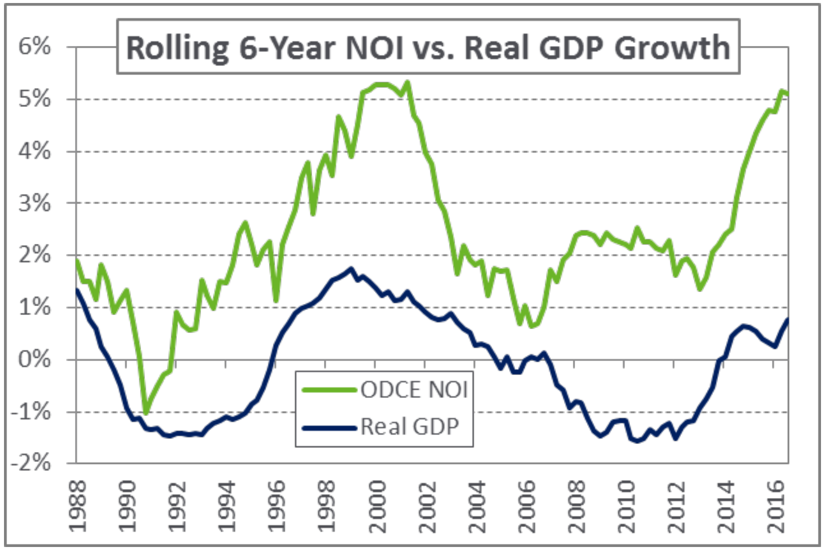
- Includes MLPs, natural resource equities, global infrastructure equities, and REITs
- Notably, MLP yields have increased relative to last year in combination with generally stronger balance sheets and a double-digit price decline

Real Estate: Real income growth is a function of Net Operating Income (NOI) growth

- Rolling 6-year NOI growth exhibits cyclically economic pattern and appears to be at or near its peak

Commodities: Real income is represented by collateral return

- A cash proxy is used to represent the collateral and as such, it represents the return on cash over the investment horizon



Real Asset Yields	11/30/16	11/30/17
MLPs	7.4%	8.1%
Core Real Estate	4.7%	4.6%
US REITs	4.6%	4.0%
Global REITs	4.2%	3.6%
Global Infrastructure Equities	4.1%	3.9%
Natural Resource Equities	3.0%	3.3%
US 10-Yr Breakeven Inflation	2.0%	1.9%
Commodity Index Roll Yield	-6.5%	-1.4%

Source: (Top) NCREIF, Bloomberg, NEPC
Source: (Bottom) NCREIF, Alerian, NAREIT, S&P, Bloomberg

REAL ASSETS: VALUATION

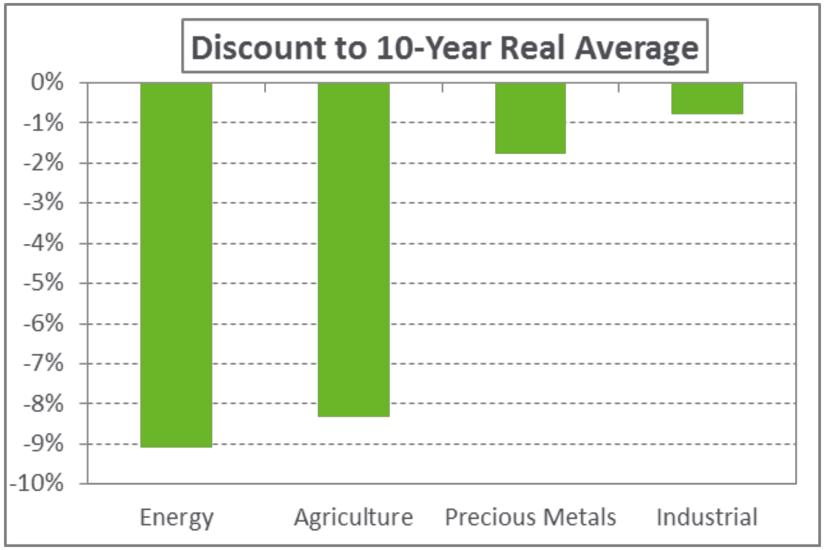
Change in commodity valuations can be attributed to both roll yield and change in spot price

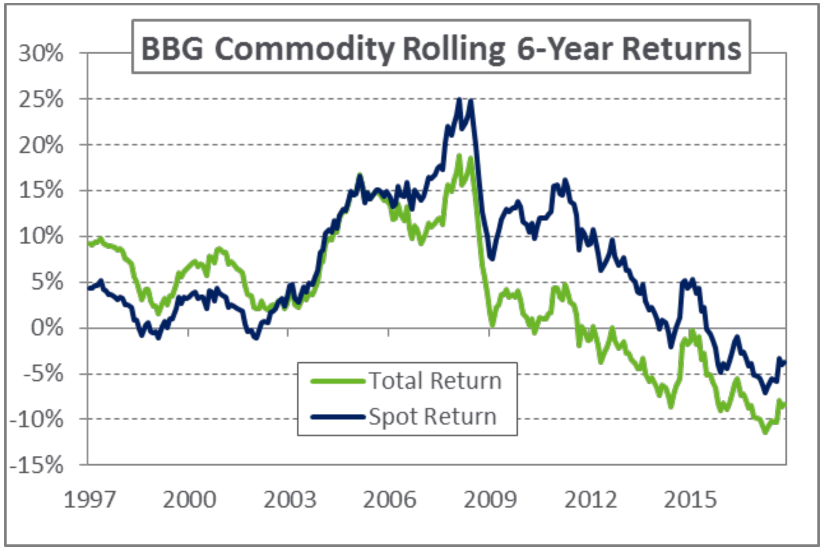
Commodity prices continue to trade below their long-term real averages, particularly in the energy and agriculture sectors

Roll yield continues to be a hurdle for investing in commodity futures

Post-2008, spot returns have had consistently higher returns than total return indices – demonstrating the impact of negative roll yield on overall investments

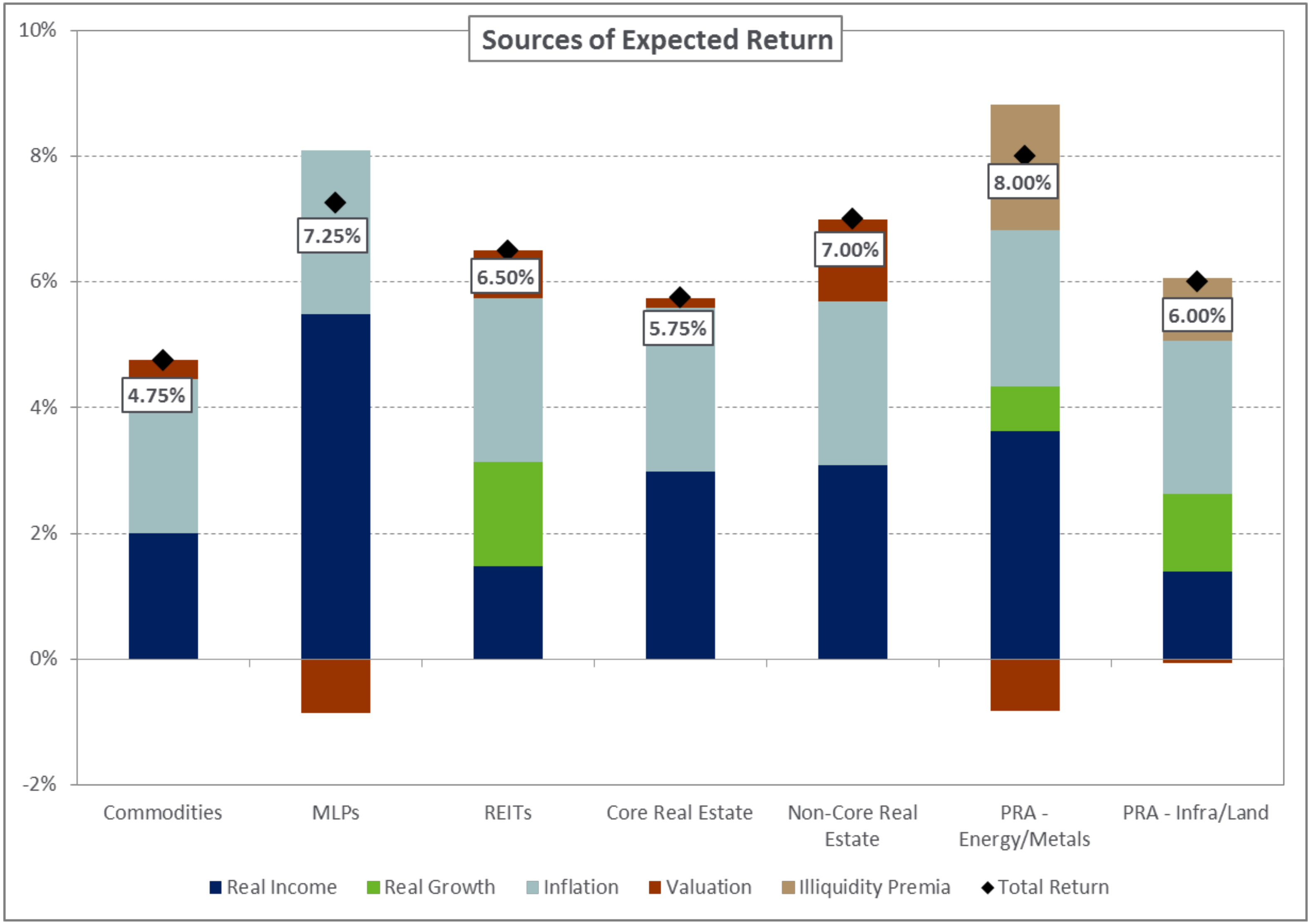
In the latter half of 2017, commodity prices rallied off mid-year lows, causing the negative roll yield to be much smaller relative to last year





Source: (Top) Bloomberg, NEPC
Source: (Bottom) Bloomberg, NEPC

REAL ASSETS: BUILDING BLOCKS



Source: NEPC

MULTI-ASSET & DERIVED COMPOSITES

NEPC, LLC

MULTI-ASSET & DERIVED COMPOSITES

Multi-asset assumptions are the result of the sum of equity, credit, and real asset building blocks

Global 60/40: 60% global equity and 40% global bonds

US 60/40: 60% US equity and 40% core bonds

Risk Parity 10% Vol: Average of 3 common risk parity exposures

GAA Strategies: Average of 3 common GAA exposures

Global Equity: Market weighted blend of MSCI ACWI IMI (US, Non-US Developed, Emerging)

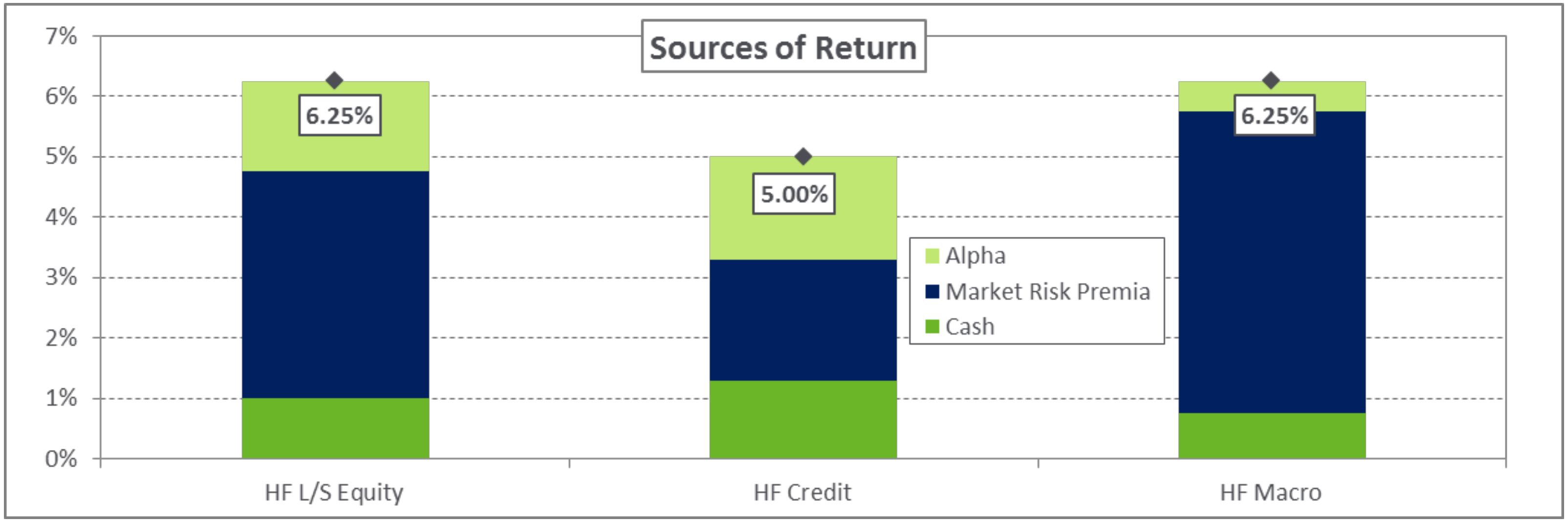
Core Bonds: Market weighted blend of Bloomberg Barclays US Aggregate Bond Index (Treasuries, IG Credit, MBS)

Real Assets (Liquid): Weighted blend of TIPS, global equities, REITs, and commodities

Hedge Funds: Weighted blend of 40% HF equity, 40% HF credit , and 20% HF macro

Asset Class	5-7 Year Return	Change 2018-2017
Global 60/40	**4.91%**	**-.13%**
US 60/40	**4.54%**	**-.24%**
Risk Parity 10% Vol	**5.11%**	**+.04%**
GAA Strategies	**5.44%**	**-.11%**
Hedge Funds – Macro Strategies	**6.25%**	**-**
Global Equity	**6.88%**	**-.33%**
Core Bonds	**2.75%**	**+.10%**
Real Assets (Liquid)	**5.87%**	**-.05%**
Hedge Funds	***5.83%***	***-.12%***

HEDGE FUND ASSUMPTIONS



Source: NEPC

	Equity	Credit	Macro
Underlying Market Beta	Global Equity	High Yield, $ EMD, Bank Loans	Relative Value (Rates, Equity, Commodities)

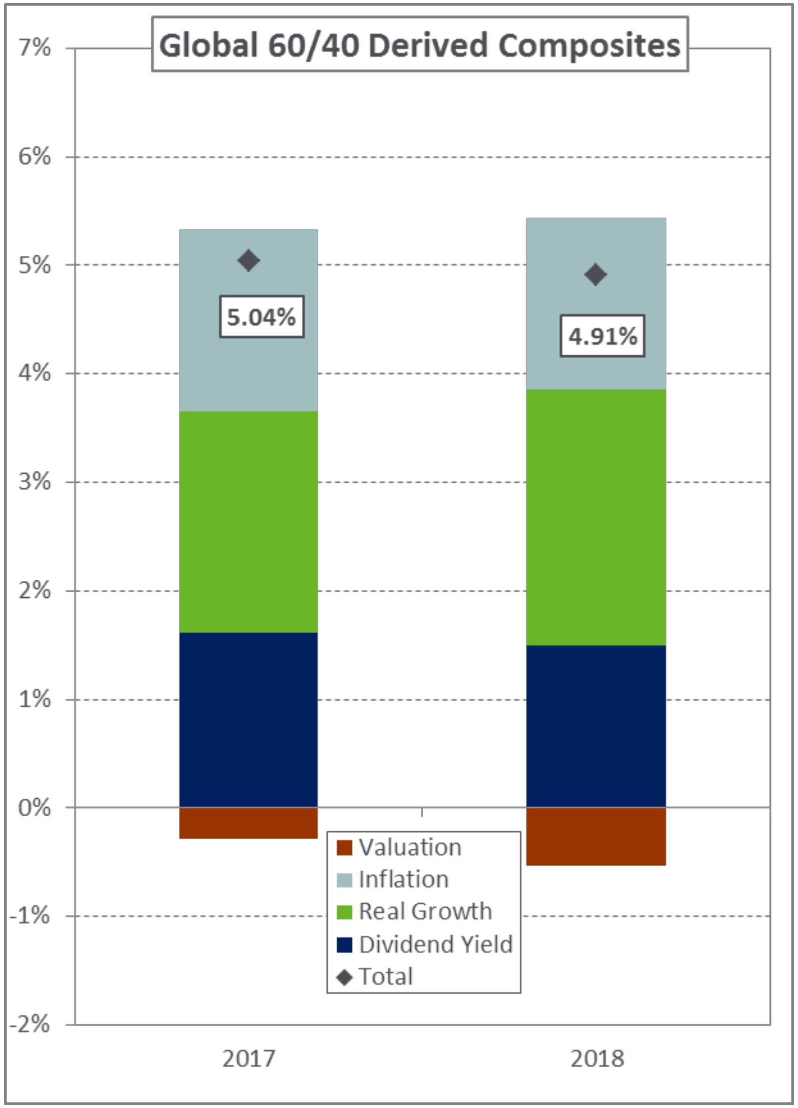
Hedge fund assumption constructed from building blocks of broad hedge fund categories

Build up of 40% Equity, 40% Credit, and 20% Macro-related strategies

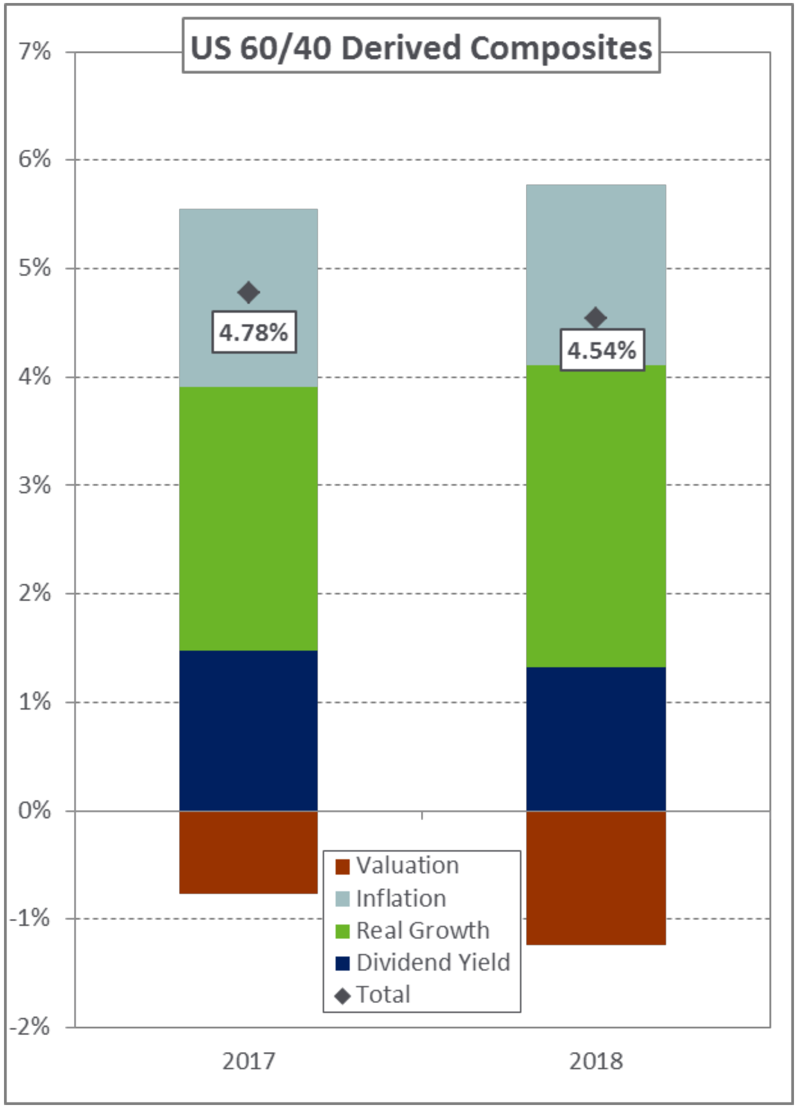
Based on analysis of historical return, risk and correlation for underlying strategies and total universe

Use NEPC-standard market betas as building blocks as well as an alpha component

GLOBAL VS. US 60/40 DERIVED COMPOSITES



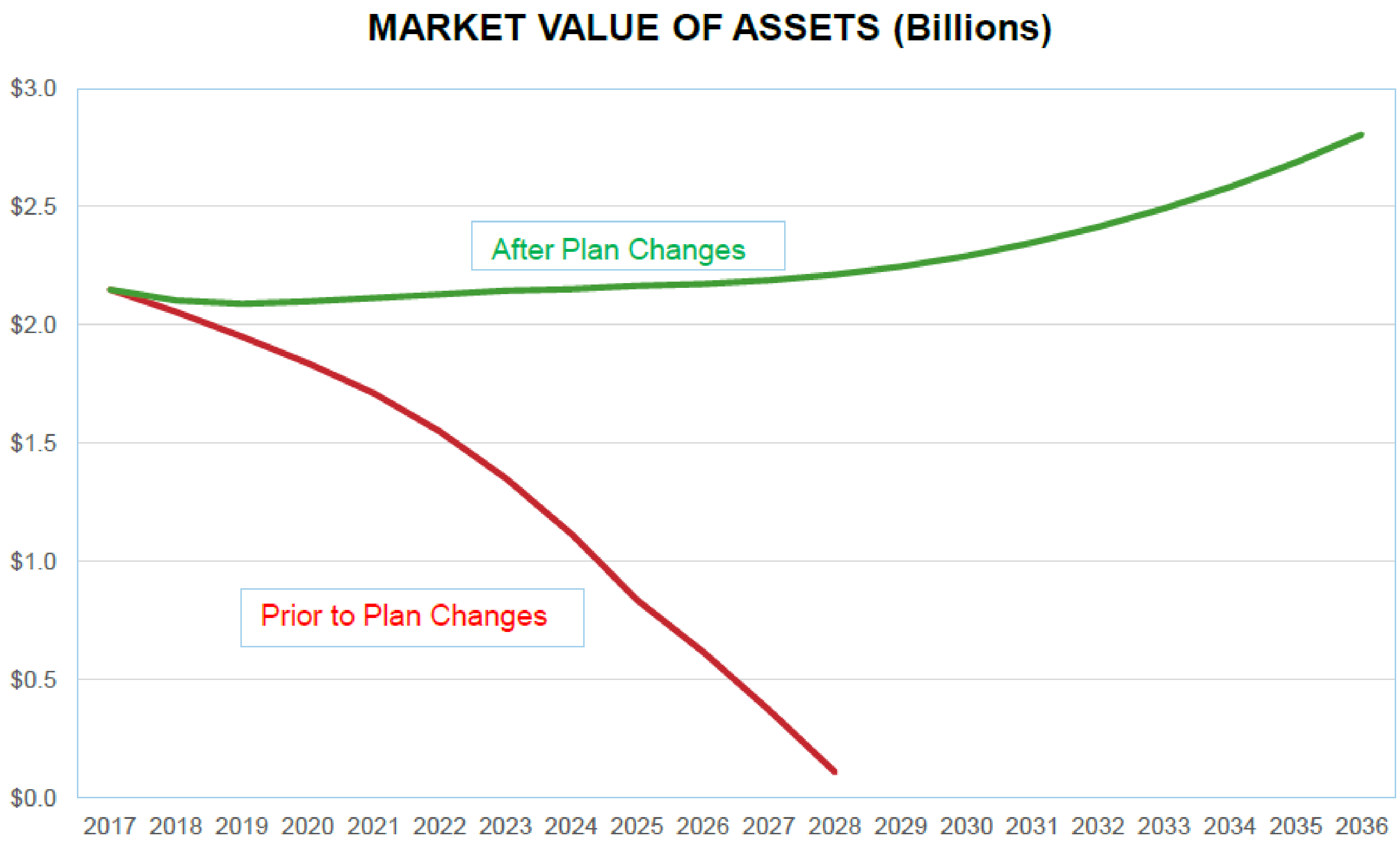
Source: NEPC



Source: NEPC

APPENDIX

LONG TERM SOLVENCY



Source: Segal

2018 5-7 YEAR RETURN FORECASTS

Geometric Expected Return			
Asset Class	**2018**	**2017**	**2018-2017**
Cash	2.00%	1.75%	+0.25%
Treasuries	2.25%	2.00%	+0.25%
IG Corp Credit	3.50%	3.75%	-0.25%
MBS	2.50%	2.25%	+0.25%
Core Bonds*	2.75%	2.65%	+0.10%
TIPS	3.25%	3.00%	+0.25%
High-Yield Bonds	3.75%	4.75%	-1.00%
Bank Loans	4.50%	5.25%	-0.75%
Non-US Bonds (Unhedged)	0.50%	1.00%	-0.50%
Non-US Bonds (Hedged)	0.73%	1.09%	-0.36%
EMD External	4.25%	4.75%	-0.50%
EMD Local Currency	6.00%	6.75%	-0.75%
Large Cap Equities	5.25%	5.75%	-0.50%
Small/Mid Cap Equities	5.75%	6.00%	-0.25%
Int'l Equities (Unhedged)	7.50%	7.25%	+0.25%
Int'l Equities (Hedged)	7.82%	7.57%	+0.25%
Emerging Int'l Equities	9.00%	9.50%	-0.50%
Private Equity	8.00%	8.25%	-0.25%
Private Debt	6.50%	7.25%	-0.75%
Core Real Estate	5.75%	6.00%	-0.25%
Commodities	4.75%	4.75%	-
Hedge Funds**	5.83%	5.95%	-0.12%

* Core Bonds assumption based on market weighted blend of components of Aggregate Index (Treasuries, IG Corp Credit, and MBS).
** Hedge Funds is a calculated blend of 40% Equity, 40% Credit, 20% Macro-related strategies.

2018 5-7 YEAR RETURN FORECASTS

Geometric Expected Return			
Asset Class	**2018**	**2017**	**2018-2017**
Short Treasuries	2.25%	2.00%	+0.25%
US 10 Yr. Treasury	2.25%	2.00%	+0.25%
Long Treasuries	2.00%	1.75%	+0.25%
20+ Year STRIPS	1.75%	1.50%	+0.25%
Short Credit	2.75%	2.75%	-
Long Credit	4.00%	4.25%	-0.25%
Long Government/Credit*	3.26%	3.33%	-0.07%
Non-US Cash**	0.50%	0.25%	+0.25%
Non-US Inflation-Linked Bonds	1.75%	1.00%	+0.75%
Short High Yield	4.25%	5.00%	-0.75%
Municipal Bonds (1-10 Year)	2.50%	-	-
High Yield Municipal Bonds	3.75%	4.25%	-0.50%
Global Equity*	6.88%	7.21%	-0.33%
MLPs	7.25%	7.00%	+0.25%
REITs	6.50%	6.50%	-
Real Assets (Liquid)**	5.87%	5.92%	-0.05%
Non-Core Real Estate	7.00%	N/A	N/A
Private Real: Energy/Metals	8.00%	8.25%	-0.25%
Private Real: Infrastructure/Land	6.00%	6.00%	-
Hedge Funds - Long/Short	6.25%	6.25%	-
Hedge Funds – Credit	5.00%	5.25%	-0.25%
Hedge Funds – Macro	6.25%	6.25%	-

* Assumption based on market weighted blend of index components
** Custom weighted blend of underlying asset classes

2018 VOLATILITY FORECASTS

Volatility			
Asset Class	**2018**	**2017**	**2018-2017**
Cash	1.00%	1.00%	-
Treasuries	5.50%	5.50%	-
IG Corp Credit	7.50%	7.50%	-
MBS	7.00%	7.00%	-
Core Bonds*	5.99%	6.03%	-0.04%
TIPS	6.50%	6.50%	-
High-Yield Bonds	13.00%	13.00%	-
Bank Loans	9.00%	9.00%	-
Non-US Bonds (Unhedged)	10.00%	8.50%	+1.50%
Non-US Bonds (Hedged)	4.50%	5.00%	-0.50%
EMD External	13.00%	13.00%	-
EMD Local Currency	13.00%	15.00%	-2.00%
Large Cap Equities	17.50%	17.50%	-
Small/Mid Cap Equities	21.00%	21.00%	-
Int'l Equities (Unhedged)	21.00%	21.00%	-
Int'l Equities (Hedged)	18.00%	18.00%	-
Emerging Int'l Equities	28.00%	28.00%	-
Private Equity	23.00%	23.00%	-
Private Debt	13.00%	14.00%	-1.00%
Core Real Estate	13.00%	15.00%	-2.00%
Commodities	19.00%	19.00%	-
Hedge Funds**	9.07%	8.74%	-0.33%

* Core Bonds assumption based on market weighted blend of components of Aggregate Index (Treasuries, IG Corp Credit, and MBS).

** Hedge Funds is a calculated blend of 40% Equity, 40% Credit, 20% Macro-related strategies.

2018 VOLATILITY FORECASTS

Volatility			
Asset Class	**2018**	**2017**	**2018-2017**
Short Treasuries	2.50%	2.50%	-
US 10 Yr. Treasury	7.50%	7.50%	-
Long Treasuries	12.00%	12.00%	-
20+ Yr. STRIPS	19.00%	19.00%	-
Short Credit	3.50%	3.50%	-
Long Credit	12.00%	13.00%	-1.00%
Long Government/Credit*	11.26%	12.01%	-0.75%
Non-US Cash**	1.00%	1.00%	-
Non-US 10 Yr. Sovereigns**	6.50%	6.50%	-
Non-US Inflation-Linked Bonds (H)	5.50%	6.00%	-0.50%
Short High Yield	8.50%	9.00%	-0.50%
Municipal Bonds (1-10 Year)	5.50%	-	-
Global Equity***	18.22%	18.26%	-0.04%
MLPs	19.00%	20.00%	-1.00%
REITs	21.00%	21.00%	-
Real Assets (Liquid)****	13.06%	12.83%	+0.23%
Non-Core Real Estate	17.00%	N/A	N/A
Private Real: Energy/Metals	21.00%	21.00%	-
Private Real: Infrastructure/Land	12.00%	14.00%	-2.00%
Hedge Funds - Long/Short	11.00%	11.00%	-
Hedge Funds – Credit	9.50%	9.50%	-
Hedge Funds – Macro	9.50%	9.50%	-

* Assumption based on market weighted blend of index components
** Custom weighted blend of underlying asset classes

2018 30 YEAR RETURN FORECASTS

Geometric Expected Return			
Asset Class	**2018**	**2017**	**2018-2017**
Cash	2.75%	3.00%	-0.25%
Treasuries	3.25%	3.50%	-0.25%
IG Corp Credit	4.75%	5.00%	-0.25%
MBS	3.25%	3.50%	-0.25%
Core Bonds*	3.75%	4.00%	-0.25%
TIPS	3.75%	3.75%	-
High-Yield Bonds	5.50%	5.75%	-0.25%
Bank Loans	5.50%	6.00%	-0.50%
Non-US Bonds (Unhedged)	2.50%	2.75%	-0.25%
Non-US Bonds (Hedged)	2.77%	2.87%	-0.10%
EMD External	5.00%	5.75%	-0.75%
EMD Local Currency	6.50%	6.50%	-
Large Cap Equities	7.50%	7.50%	-
Small/Mid Cap Equities	7.75%	7.75%	-
Int'l Equities (Unhedged)	7.75%	7.75%	-
Int'l Equities (Hedged)	8.14%	8.14%	-
Emerging Int'l Equities	9.25%	9.50%	-0.25%
Private Equity	9.50%	9.50%	-
Private Debt	7.50%	8.00%	-0.50%
Core Real Estate	6.50%	6.50%	-
Commodities	5.50%	5.50%	-
Hedge Funds**	6.34%	6.47%	-0.13%

* Core Bonds assumption based on market weighted blend of components of Aggregate Index (Treasuries, IG Corp Credit, and MBS).
** Hedge Funds is a calculated blend of 40% Equity, 40% Credit, 20% Macro-related strategies.

2018 30 YEAR RETURN FORECASTS

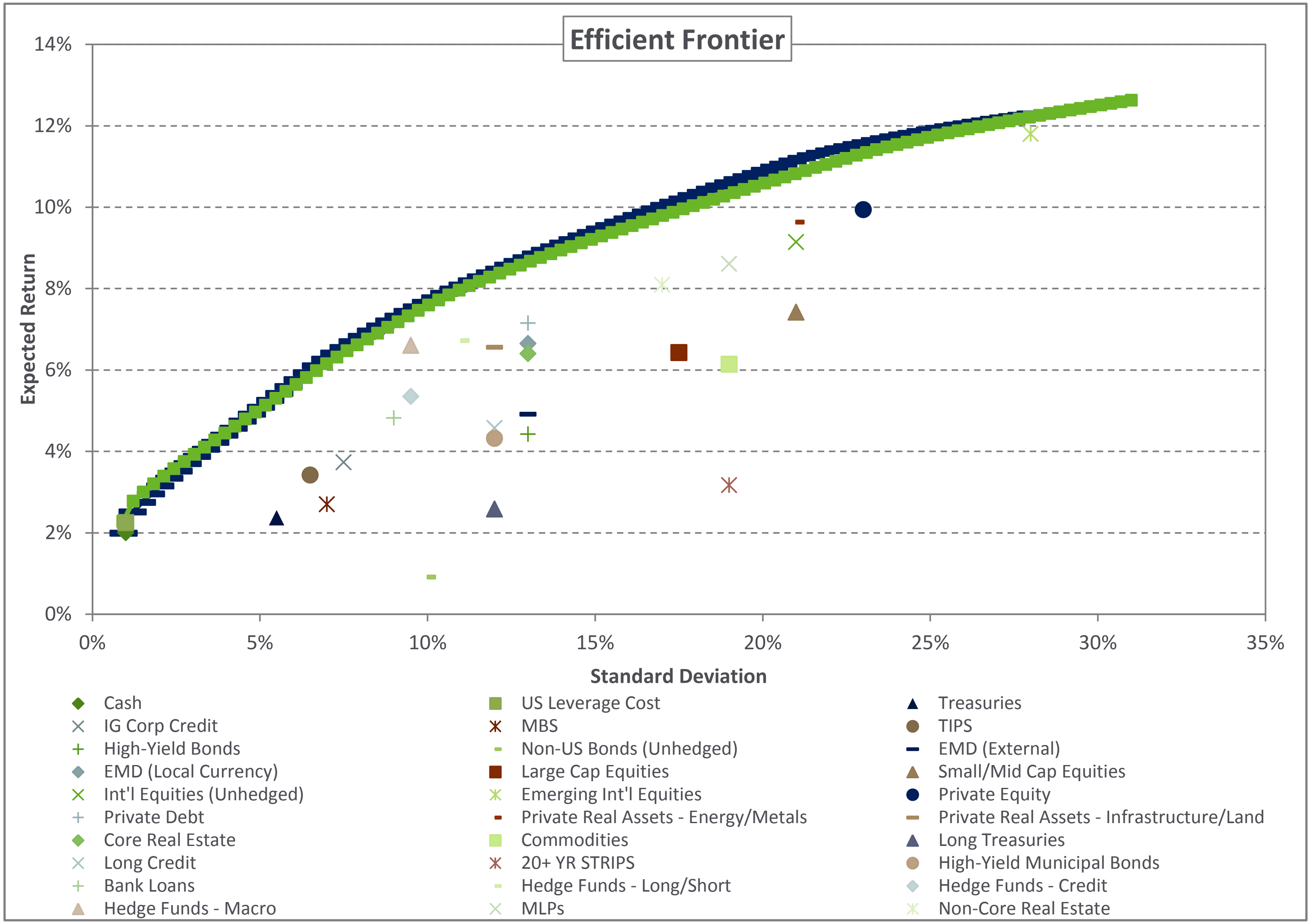
Geometric Expected Return			
Asset Class	**2018**	**2017**	**2018-2017**
Short Treasuries	3.00%	3.00%	-
US 10 Yr. Treasury	3.50%	3.50%	-
Long Treasuries	3.50%	3.75%	-0.25%
20+ Yr. STRIPS	3.50%	3.75%	-0.25%
Short Credit	3.75%	3.75%	-
Long Credit	5.25%	5.75%	-0.50%
Long Government/Credit*	4.62%	5.04%	-0.42%
Non-US Cash**	2.00%	2.00%	-
Non-US 10 Yr. Sovereigns**	2.50%	2.50%	-
Non-US Inflation-Linked Bonds	3.00%	2.75%	+0.25%
Short High Yield	5.25%	5.75%	-0.50%
Municipal Bonds (1-10 Year)	3.25%	-	-
Global Equity***	8.24%	8.35%	-0.11%
MLPs	7.50%	7.50%	-
REITs	6.75%	6.75%	-
Real Assets (Liquid)****	6.75%	6.79%	-0.04%
Non-Core Real Estate	7.50%	N/A	N/A
Private Real: Energy/Metals	7.75%	7.75%	-
Private Real: Infrastructure/Land	6.25%	6.00%	+0.25%
Hedge Funds - Long/Short	7.25%	7.25%	-
Hedge Funds – Credit	5.25%	5.50%	-0.25%
Hedge Funds – Macro	6.25%	6.25%	-

* Assumption based on market weighted blend of index components
** Custom weighted blend of underlying asset classes

2018 CORRELATIONS

Asset Class	Cash	US Lev	Tsy	IG	MBS	TIPS	HY	Non-US Bonds (U)	Non-US Bonds (H)	EMD (Ext)	EMD (Loc)	Large Cap	SMID	Int'l (U)	Int'l (H)	EME	PE	PD	PRA - Egy/Met	PRA: Infra/ Land	Core RE	Comm odities
Cash	1.00	0.90	0.20	0.10	0.25	0.35	-0.05	0.10	0.15	0.05	0.05	-0.10	-0.15	-0.10	-0.10	-0.10	-0.20	0.00	-0.05	0.15	0.10	0.10
US Lev	0.90	1.00	0.20	0.10	0.25	0.35	-0.05	0.10	0.15	0.05	0.05	-0.10	-0.15	-0.10	-0.10	-0.10	-0.25	0.00	-0.05	0.15	0.10	0.10
Treasuries	0.20	0.20	1.00	0.65	0.85	0.65	0.10	0.45	0.70	0.20	0.10	-0.10	-0.15	-0.10	-0.10	-0.20	-0.15	-0.35	-0.20	-0.05	0.10	-0.10
IG	0.10	0.10	0.65	1.00	0.75	0.65	0.55	0.45	0.60	0.60	0.50	0.25	0.25	0.30	0.30	0.35	0.30	0.15	0.20	0.10	0.15	0.15
MBS	0.25	0.25	0.85	0.75	1.00	0.65	0.30	0.45	0.60	0.35	0.25	0.10	0.10	0.05	0.05	-0.10	0.10	-0.15	-0.05	-0.05	0.05	0.00
TIPS	0.35	0.35	0.65	0.65	0.65	1.00	0.20	0.40	0.65	0.30	0.25	-0.10	-0.10	-0.05	-0.05	-0.10	-0.10	-0.10	-0.05	0.05	0.10	0.30
HY	-0.05	-0.05	0.10	0.55	0.30	0.20	1.00	0.10	0.20	0.70	0.55	0.65	0.70	0.65	0.65	0.70	0.60	0.65	0.50	0.40	0.35	0.20
Non-US Bonds (U)	0.10	0.10	0.45	0.45	0.45	0.40	0.10	1.00	0.40	0.30	0.35	0.00	-0.05	0.35	0.05	0.25	-0.15	-0.10	-0.10	0.05	0.15	0.10
Non-US Bonds (H)	0.15	0.15	0.70	0.60	0.60	0.65	0.20	0.40	1.00	0.30	0.20	-0.10	-0.15	-0.10	-0.10	-0.20	-0.20	-0.10	-0.15	0.00	0.05	-0.10
EMD (Ext)	0.05	0.05	0.20	0.60	0.35	0.30	0.70	0.30	0.30	1.00	0.75	0.55	0.55	0.60	0.60	0.70	0.35	0.50	0.40	0.35	0.25	0.35
EMD (Local)	0.05	0.05	0.10	0.50	0.25	0.25	0.55	0.35	0.20	0.75	1.00	0.60	0.50	0.70	0.65	0.80	0.40	0.60	0.40	0.40	0.40	0.50
Large Cap	-0.10	-0.10	-0.10	0.25	0.10	-0.10	0.65	0.00	-0.10	0.55	0.60	1.00	0.90	0.70	0.75	0.65	0.70	0.60	0.65	0.50	0.40	0.30
SMID Cap	-0.15	-0.15	-0.15	0.25	0.10	-0.10	0.70	-0.05	-0.15	0.55	0.50	0.90	1.00	0.65	0.70	0.65	0.75	0.65	0.70	0.50	0.40	0.30
Int'l Eqty (U)	-0.10	-0.10	-0.10	0.30	0.05	-0.05	0.65	0.35	-0.10	0.60	0.70	0.70	0.65	1.00	0.85	0.70	0.60	0.75	0.55	0.45	0.35	0.40
Int'l Eqty (H)	-0.10	-0.10	-0.10	0.30	0.05	-0.05	0.65	0.05	-0.10	0.60	0.65	0.75	0.70	0.85	1.00	0.70	0.65	0.75	0.60	0.45	0.40	0.30
EM	-0.10	-0.10	-0.20	0.35	-0.10	-0.10	0.70	0.25	-0.20	0.70	0.80	0.65	0.65	0.70	0.70	1.00	0.45	0.80	0.50	0.40	0.30	0.55
PE	-0.20	-0.25	-0.15	0.30	0.10	-0.10	0.60	-0.15	-0.20	0.35	0.40	0.70	0.75	0.60	0.65	0.45	1.00	0.65	0.85	0.60	0.50	0.25
PD	0.00	0.00	-0.35	0.15	-0.15	-0.10	0.65	-0.10	-0.10	0.50	0.60	0.60	0.65	0.75	0.75	0.80	0.65	1.00	0.65	0.50	0.40	0.30
PRA - Egy/Met	-0.05	-0.05	-0.20	0.20	-0.05	-0.05	0.50	-0.10	-0.15	0.40	0.40	0.65	0.70	0.55	0.60	0.50	0.85	0.65	1.00	0.75	0.45	0.35
PRA – Infra/Land	0.15	0.15	-0.05	0.10	-0.05	0.05	0.40	0.05	0.00	0.35	0.40	0.50	0.50	0.45	0.45	0.40	0.60	0.50	0.75	1.00	0.70	0.40
Core RE	0.10	0.10	0.10	0.15	0.05	0.10	0.35	0.15	0.05	0.25	0.40	0.40	0.40	0.35	0.40	0.30	0.50	0.40	0.45	0.70	1.00	0.30
Commodities	0.10	0.10	-0.10	0.15	0.00	0.30	0.20	0.10	-0.10	0.35	0.50	0.30	0.30	0.40	0.30	0.55	0.25	0.30	0.35	0.40	0.30	1.00

2018 EFFICIENT FRONTIER



APPENDIX

DISCLOSURES

- **NEPC, LLC is an investment consulting firm. We provide asset-liability studies for certain clients but we do not provide actuarial services. Any projections of funded status or contributions contained in this report should not be used for budgeting purposes. We recommend contacting the plan's actuary to obtain budgeting estimates.**

- **The goal of this report is to provide a basis for substantiating asset allocation recommendations.**

- **The projection of liabilities in this report uses standard actuarial projection methods and does not rely on actual participant data. Asset and liability information was received from the plan's actuary, and other projection assumptions are stated in the report.**

- **Assets are projected using a methodology chosen by the client. Gains and losses are estimated through investment returns generated by applying NEPC's 5-7 year asset class assumptions and scenario assumptions for the current year.**

- **This report is based on forward-looking assumptions, which are subject to change.**

- **This report may contain confidential or proprietary information and may not be copied or redistributed.**

DISCUSSION SHEET

ITEM #C4

Topic: **Fiduciary liability insurance**

Attendees: Iva Giddiens, Arthur J. Gallagher (by phone)
James Martinez, Arthur J. Gallagher (by phone)

Discussion: DPFP currently carries $50 million in fiduciary insurance coverage. Staff is proposing to reduce this coverage to reduce premium expense. Representatives of DPFP's insurance broker, Arthur J. Gallagher, will be available by phone to answer questions.

Staff Recommendation: **Reduce** fiduciary coverage from $50 million to $15 - $25 million.

DISCUSSION SHEET

ITEM #C5

Topic: **Board of Trustees Governance and Conduct Policy**

Discussion: Staff is proposing changes to the Governance and Conduct Policy relating to 1) the basis for excusing Trustee absences from Board meetings and 2) the method by which Trustees may request that items be placed on the Board meeting agenda.

DALLAS POLICE & FIRE PENSION SYSTEM

BOARD OF TRUSTEES GOVERNANCE AND CONDUCT POLICY

As ~~Adopted~~ Amended ~~December 14, 2017~~ February 8, 2018

DALLAS POLICE AND FIRE PENSION SYSTEM

BOARD OF TRUSTEES GOVERNANCE AND CONDUCT POLICY

As Adopted December 14, 2017
As Amended February 2, 2018

A. Purpose

The Board of Trustees ("Board") of the Dallas Police and Fire Pension System ("DPFP" or the "System") is required to administer DPFP in accordance with Article 6243a-1 (the "Plan"), Chapter 802, Title 8 of the Texas Government Code and other applicable state and federal laws and regulations. In furtherance of these obligations, the Board adopts the following Governance and Conduct Policy (this "Policy"), which shall be applicable to all Trustees.

B. Trustee Communication

1. Trustee Communication with Members

   a. Trustees shall be aware of the risk of communicating inaccurate information to members and beneficiaries and the potential exposure to liability and possible harm that may result from such miscommunications. Trustees shall mitigate this risk by refraining from providing specific advice, counsel or education with respect to the rights or benefits a member or beneficiary may be entitled to pursuant to the Plan or any Board policies.

   b. In the event a member or beneficiary requests that a Trustee provide explicit advice with respect to System benefits or related policies, the Trustee should assist by referring the member or beneficiary to the Executive Director or his or her designee or by having the Executive Director or his or her designee contact the member or beneficiary. The Trustee shall be informed of the outcome.

   c. Trustees shall direct questions regarding any aspect of the System's operations to the Executive Director or appropriate senior DPFP staff member.

2. Trustee Communication with Staff

   a. Trustees recognize that their link to DPFP operations and administration is through the Executive Director, the executive staff or a designee of the Executive Director. A Trustee should refrain from communicating directly with DPFP staff other than through the Executive Director, the Chief Investment Officer, the Chief Financial Officer, the General Counsel or another designee of the Executive

B. Trustee Communication (continued)

2. Trustee Communication with Staff (continued)

Director, unless otherwise directed by the Executive Director. If the communication involves the Executive Director, the Trustee should communicate with the General Counsel of DPFP or outside fiduciary counsel, as applicable.

b. In the spirit of open communication, individual Trustees shall share any information pertinent to the System with the Executive Director in a timely manner, and the Executive Director shall similarly share with the Board any information pertinent to the Board's role and responsibilities in a timely manner.

c. The Executive Director shall ensure that information that has been requested by the Board or by a Trustee is made available to all Trustees as appropriate.

3. Trustee Communication with External Parties

a. The Executive Director or the Chairman or their designee shall serve as the spokesperson for the System, unless the Board designates another member of the Board to serve as spokesperson on a specified issue. The following guidelines shall apply with respect to the spokesperson:

i. If time permits, and to the extent permitted by the Texas Open Meetings Act, the spokesperson shall address sensitive, high profile issues with as many Trustees as possible, prior to engaging in external communications. At a minimum, the Chairman and Vice Chairman shall be contacted.

ii. To the extent possible, in situations where Board policy concerning an issue has not been established, the Board or an appropriate committee shall meet to discuss the issue prior to the spokesperson's engaging in external communications.

b. When asked to be interviewed or otherwise approached by the media for substantive information concerning the affairs of the System, Trustees should generally refer the matter to the Executive Director or spokesperson and shall make no commitments to the media on behalf of the Board or the System.

c. In their external communications, Trustees shall, as appropriate:

i. Speak on behalf of the Board only when explicitly authorized to do so by the Chairman or the Board;

ii. Indicate if they are speaking in a capacity other than that of a member of the Board;

c. In their external communications, Trustees shall, as appropriate: (continued)

iii. Respectfully indicate when (a) they are representing a personal position, opinion, or analysis, as opposed to one approved by the Board, (b) their position, opinion, or analysis does not represent the official position of the Board, and (c) their position, opinion or analysis is in opposition to the official position of the Board; and

iv. Make known to the Executive Director in a timely fashion if a personal position, opinion, or analysis was publicly communicated, such that it could receive media coverage. The Trustee shall advise as to whom the communication was made and what was discussed.

d. Trustees may indicate publicly that they disagree with a policy or decision of the Board, but shall do so respectfully and shall abide by such policy or decision to the extent consistent with their fiduciary duties.

e. Communications by Trustees, when acting in their capacity as Trustees, should be consistent with their fiduciary duty to represent the interests of all DPFP members and beneficiaries.

f. Written press releases concerning the business of DPFP shall be the responsibility of the Executive Director and shall clearly and accurately reflect the provisions of the System and the policies of the Board. The Executive Director shall, when feasible, submit to the Chairman and the Vice Chairman for approval all press releases of a sensitive or high-profile nature or pertaining to Board policy. Such press releases shall be shared with the Board concurrently with their release.

g. Trustees should not prepare materials for publication or general distribution which are related to the affairs of the System without the consent of the Chairman. To ensure the accuracy of materials prepared by Trustees for publication or general distribution which are related to the affairs of the System, and to ensure that the System is not inadvertently placed at risk, Trustees agree to provide such material in a timely manner to the Executive Director, or his or her designee, for review prior to distribution or publication, but such distribution or publication shall only occur if the Chairman has given his or her consent.

C. Requests by Individual Trustees for Information

1. Trustees are entitled to information necessary to make informed decisions relating to their role and responsibilities. However, it is recognized that Trustee requests for information that is not pertinent to their role or any decisions to be made by Trustees can place an unnecessary burden on the System. It is also recognized that access to certain confidential information by Trustees may violate the requirements for keeping such information confidential, be in conflict with the purpose for keeping such information confidential, or unnecessarily jeopardize the System's ability to keep such information confidential.

2. All requests by individual Trustees for information should be directed to the Executive Director or presented at a Board meeting or appropriate committee meeting. Requests for non-confidential information that do not require a significant expenditure of DPFP staff time or System resources or the use of external resources should be fulfilled by the Executive Director. (Requests for confidential information are addressed in Section C.5 below).

3. Requests for non-confidential information that require a significant expenditure of DPFP staff time or System resources or the use of external resources should be presented to the Board or appropriate committee for approval.

4. In determining whether to approve a potentially burdensome request for non-confidential information, the Board or committee shall balance the Trustee's need to access the particular information for purposes of performing of his or her role as a Trustee with the burden that such request will place on the System. In making its determination, the Board may consider, as it deems appropriate under the circumstances and without limitation, the following factors:

    a. An assessment of the Trustee's stated purposes and objectives for requesting the information, including, but not limited to, whether (i) the request is tailored to the stated purposes or objectives of the request; (ii) the stated purposes or objectives of the request are specific or general and (iii) the requested information is pertinent to the Trustee's role or any decision to be made by the Trustee;

    b. Staff time that would be required, and costs and expenses that would be incurred by the System, in responding to the Trustee's request, including, but not limited to, an assessment of whether the information requested already exists as requested and/or whether the request involves acquisition, creation or synthesis of information, analysis, computation or programming that would not otherwise be performed but for the request; other non-public information the release or provision of which the Board determines is not in the best interest of the System's members and beneficiaries; and

C. Requests by Individual Trustees for Information (continued)

c. An assessment of any possibility that the request for information relates in whole or in part, or directly or indirectly, either (i) to the requesting Trustee's self-interest as distinct from that of members and beneficiaries and/or; (ii) to the requesting Trustee's duties or loyalties to any person, entity or political or corporate official or body other than DPFP.

5. Requests for Confidential Information

a. Confidential information of the System includes:

i. non-public information relating to investments, members or beneficiaries, litigation, or other matters in which DPFP has a responsibility (which may be determined by the Board with appropriate advice) to protect the information from disclosure under statute, contract, regulation, DPFP policy, governmental order or other obligation; or

ii. other non-public information the release or provision of which the Board determines is not in the best interest of members and beneficiaries.

b. All requests by individual Trustees for disclosure of or access to confidential information that has not been presented to the Board as a whole shall be considered by the Board, which is solely responsible for making a determination as to the request.

c. In considering whether to release or make available confidential information in any form or by any means to any Trustee who requests such information, the Board shall balance said Trustee's need to access the particular information for purposes of performing of his or her role as a Trustee with the need to protect such confidential information. In making its determination, the Board may consider, as it deems appropriate under the circumstances and without limitation, the factors set forth in Section C.4. above and the following factors:

i. Whether DPFP regularly or traditionally provides the requested confidential information to Trustees;

ii. An assessment of the Trustee's stated purposes and objectives for requesting the information, including, but not limited to, whether alternative measures or DPFP resources would adequately satisfy the Trustee's stated purposes and objectives without the release of confidential information;

C. Requests by Individual Trustees for Information -(continued)

iii. The potential liability or damage to DPFP and to Trustees that may result, directly or indirectly, from unauthorized, negligent or inappropriate use, handling or further disclosure of the information; and

iv. An assessment of whether it is likely or possible that the information requested, if combined together with other available non-DPFP information, might impair the interests of the members and beneficiaries in confidentiality and/or privacy, or might impair the interests of DPFP's investment program or portfolio.

6. A Board determination to disclose or otherwise make available confidential information to a Trustee in response to a Trustee's request may include within its terms any conditions of time, place, medium and form of disclosure or availability deemed appropriately protective or prudent under the circumstances as determined by the Board in its discretion.

7. A Board determination to disclose or otherwise make available confidential information to a Trustee in response to a Trustee's request shall not waive any confidentiality rights of DPFP or its members or beneficiaries and shall not be deemed or construed to be a waiver of confidentiality or consent to any subsequent use, transfer or disclosure of such information to any other party, including but not limited to, any individual, entity or political or corporate official or body other than DPFP.

8. Unauthorized use by a Trustee of confidential information made available to such Trustee under this section shall constitute an unpermitted appropriation of DPFP information and a violation of this Policy. The Board in its discretion may take any legal action to secure or vindicate its rights in DPFP information that is the subject of suspected or alleged unauthorized use.

9. Nothing in this section shall be construed to contravene the requirements of the Texas Public Information Act, as applicable to System information.

10. Nothing in this section shall be construed to limit the Board's ability as a whole to require that DPFP staff provide information to the Board.

D. Voting Requirements for Board Action

Any action by the Board, except those where the Plan specifically requires approval by 2/3 of all the Trustees of the Board, is required to be approved by a majority of all the Trustees of the Board, i.e. at least six Trustees must approve any Board action regardless of the number Trustees present.

E. Board Agenda

1. The agenda for each Board meeting will be set by the Executive Director. The Executive Director shall consult with the Chairman on the agenda to be posted for the next meeting or meetings in the future.
2. The Chairman may direct that an item be placed on the agenda for consideration by the Board.
3. Any Trustee may file a written request with the ~~Executive Director~~ Chairman asking that a particular item be placed on the agenda for a future meeting. ~~Upon receipt of~~If either the Chairman approves such request or (ii) three Trustees file a written request with the Executive Director to have such item placed on the agenda for a future meeting, the Executive Director will endeavor to cause such item to be on the agenda for the meeting date requested, subject to the timing of the request, the amount of preparation time required to address such item as well as the projected meeting length of the requested meeting given items already scheduled to be on the agenda.
4. No agenda item may be requested which is a reconsideration of a motion the Board has previously made within the prior twelve months unless the request is made by a Trustee or Trustees who voted in the majority on such motion when last considered by the Board. The Chairman shall have the power to end discussion regarding a particular agenda item if, in the Chairman's discretion, the substance of the discussion relates to a motion that has been previously considered by the Board within the last twelve months and the agenda item has been specifically requested by a Trustee or Trustees, none of whom had voted in the majority on such previously considered item.

F. Board Meetings

1. The Board will use Robert's Rules of Order Newly Revised (RONR 11th ed., 2011) for parliamentary procedure, subject to applicable law and policy.

F. Board Meetings (continued)

2. A Trustee shall be considered to have attended a Board meeting if the Trustee is present for at least 50% of the meeting time initially scheduled on the Order of Business posted on the DPFP website on the day of the meeting.

3. Participation in a Board meeting through telephone conference shall be permitted.

4. If a Trustee does not attend a Board meeting, the Trustee may provide a written explanation to the Board to be considered at the next Board meeting.
   a. At the next Board meeting, the Board shall consider the written explanation together with any other oral information the Trustee shall provide.
   b. The Board shall vote as to whether the absence shall be noted as excused.
   c. No reason related to a Trustee's business, work or employment shall be considered a valid basis for excusing an absence. Only personal reasons such as illness, death or extraordinary personal circumstances involving the Trustee or the Trustee's family shall be considered as a basis for excusing an absence.

5. The Chairman shall have the power to call a special meeting.

G. Effective Date

APPROVED on ~~December 14, 2017~~ February 8, 2018 by the Board of Trustees of the Dallas Police and Fire Pension System.

____
William F. Quinn
Chairman

ATTEST:

____
Kelly Gottschalk
Secretary

DISCUSSION SHEET

ITEM #C6

Topic: **Status of RFP for Investment Consultant**

Discussion: Staff will provide an update on RFP process and timeline.

DISCUSSION SHEET

ITEM #C7

Topic: **Chief Investment Officer**

Portions of the discussion under this topic may be closed to the public under the terms of Section 551.074 of the Texas Government Code.

Discussion: The Executive Director will discuss the Chief Investment Officer recruitment.

DISCUSSION SHEET

ITEM #C8

Topic: **Legal issues**

Portions of the discussion under this topic may be closed to the public under the terms of Section 551.071 of the Texas Government Code.

a. DPFP v. The Townsend Group and Gary Lawson
b. Rawlings v. DPFP

Discussion: Counsel will brief the Board on these issues.

DISCUSSION SHEET

ITEM #C9

Topic: **Board approval of Trustee education and travel**

a. Future Education and Business-related Travel
b. Future Investment-related Travel

Discussion:

a. Per the Education and Travel Policy and Procedure, planned Trustee education and business-related travel and education which does not involve travel requires Board approval prior to attendance.

Attached is a listing of requested future education and travel noting approval status.

b. Per the Investment Policy Statement, planned Trustee travel related to investment monitoring, and in exceptional cases due diligence, requires Board approval prior to attendance.

There is no future investment-related travel for Trustees at this time.

Future Education and Business Related Travel
Regular Board Meeting – February 8, 2018

			ATTENDING	APPROVED
1.	**Conference:**	**Harvard Business School: HBX Leading with Finance**	**BD**	**01/18/2018**
	Dates:	January 17– February 28, 2018 (6 weeks)		
	Location:	Online course		
	Est. Cost:	$1,500		
2.	**Conference:**	**IFEBP: Wharton New Trustees Institute Level I: Core Concepts**		
	Dates:	February 12-14, 2018		
	Location:	Lake Buena Vista, FL		
	Est. Cost:	$2,875		
3.	**Conference:**	**Harvard Business School: HBX CORe**	**BD**	**01/18/2018**
	Dates:	March 7, 2018 (12 weeks)		
	Location:	Online course		
	Est. Cost:	$800		
4.	**Conference:**	**IFEBP: Wharton Investment Institute**		
	Dates:	April 9-11, 2018		
	Location:	Naples, FL		
	Est. Cost:	$3,000		

ATTENDING APPROVED

5. **Conference:** **TEXPERS – Advanced Trustee Training Class**
   Dates: April 14, 2018
   Location: South Padre Island, TX
   Est. Cost: $400

6. **Conference:** **TEXPERS Annual Conference**
   Dates: April 15-18, 2018
   Location: South Padre Island, TX
   Est. Cost: $1,000

7. **Conference:** **IFEBP: Wharton Portfolio Concepts and Management**
   Dates: April 23-26, 2018
   Location: Philadelphia, PA
   Est. Cost: $7,000

8. **Conference:** **NCPERS Trustee Educational Seminar (TEDS)**
   Dates: May 12-13, 2018
   Location: New York, NY
   Est. Cost: $1,000

9. **Conference:** **NCPERS Accredited Fiduciary (NAF) Program (Recommend taking TEDS first)**
   Dates: May 12-13, 2018
   Location: New York, NY
   Est. Cost: $1,000

ATTENDING APPROVED

10. Conference: **NCPERS Annual Conference**
Dates: May 13-16, 2018
Location: New York, NY
Est. Cost: $3,000

11. Conference: **IFEBP: Wharton Alternative Investments**
Dates: July 30-August 1, 2018
Location: San Francisco, CA
Est. Cost: $5,500

12. Conference: **TEXPERS Summer Educational Forum**
Dates: August 12-14, 2018
Location: San Antonio, TX
Est. Cost: $1,500

13. Conference: **PRB: MET Online Core Training: Actuarial Matters**
Dates: Online - Anytime
Location: http://www.prb.state.tx.us

14. Conference: **PRB: MET Online Core Training: Benefits Administration**
Dates: Online - Anytime
Location: http://www.prb.state.tx.us

15. Conference: **PRB: MET Online Core Training: Ethics**
Dates: Online - Anytime
Location: http://www.prb.state.tx.us

16. **Conference:** **PRB: MET Online Core Training: Fiduciary Maters**
    Dates: Online - Anytime
    Location: http://www.prb.state.tx.us

17. **Conference:** **PRB: MET Online Core Training: Governance**
    Dates: Online - Anytime
    Location: http://www.prb.state.tx.us

18. **Conference:** **PRB: MET Online Core Training: Risk Management**
    Dates: Online - Anytime
    Location: http://www.prb.state.tx.us

DISCUSSION SHEET

ITEM #C10

Topic: **Unforeseeable Emergency Requests from DROP Members**

Portions of the discussion under this topic may be closed to the public under the terms of Section 551.078 of the Texas Government Code.

Discussion: The Executive Director will review with the Board for their consideration any applications under the DROP Unforeseeable Emergency Policy that have not been approved.

Staff Recommendation: To be provided at the meeting.

DISCUSSION SHEET

ITEM #D1

Topic: **Reports and concerns of active members and pensioners of the Dallas Police and Fire Pension System**

Discussion: This is a Board-approved open forum for active members and pensioners to address their concerns to the Board and staff.

DISCUSSION SHEET

ITEM #D2

Topic: **Executive Director's report**

a. Associations' newsletters
- NCPERS Monitor (January 2018)
- NCPERS PERSist (Winter 2018)

b. Employee recognition – Fourth Quarter 2017
- Employee Service Award
- Employee of the Quarter award
- Employee of the Year

c. DROP revocation

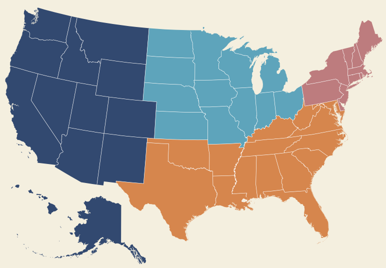
d. USERRA

e. Chief Financial Officer

Discussion: The Executive Director will brief the Board regarding the above information.

THE NCPERS
MONITOR
The Latest in Legislative News
JANUARY 2018

In This Issue



As a new Monitor feature, we will highlight pension news in one state in each of these four regions each month.

Photo Illustration © 2018, Depositphotos

I have seen over and over how powerful it is when trustees, administrators, plan participants, and beneficiaries tell their story to lawmakers and regulators.

Photo Illustration © 2018, Depositphotos

On November 1, the House Ways and Means Committee released H.R. 1, the Tax Cuts and Jobs Act of 2017. With changes that would affect almost every taxpayer.

Public Pensions Score Victory as UBIT Is Stripped from Tax Reform

Photo Illustration © 2018, Depositphotos

NCPERS members have succeeded in a hard-fought battle to strip the 2017 tax reform bill of a retroactive federal tax on state and local pension plans.

A House-Senate conference committee eliminated the tax provision known as the unrelated business income tax, or UBIT, from its final bill on December 18, just two days before Congress passed the measure. NCPERS, in collaboration with the National Association of State Retirement Administrators (NASRA) and the National Council on Teacher Retirement (NCTR), had been working since early November to stop the provision.

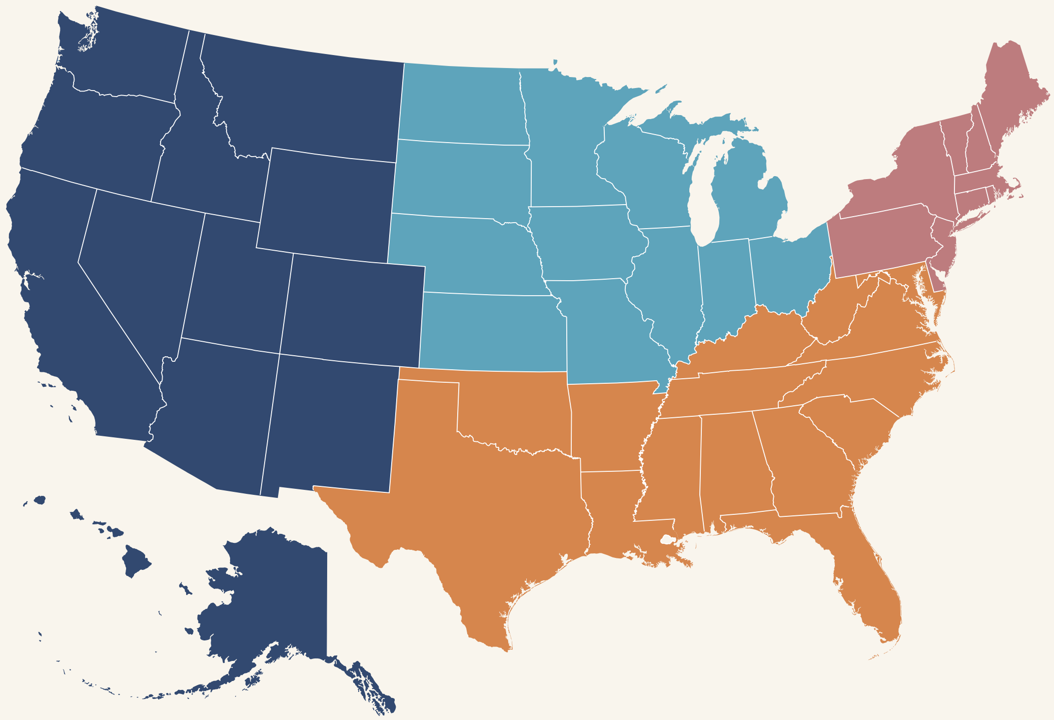
House Republicans had pushed for UBIT as a way to raise $1.1 billion new taxes over a decade in order to offset the 2017 tax reform bill's extensive tax breaks for corporations and wealthy individuals. Portfolios consisting of local and state government-backed securities and other assets that had always been exempt from UBIT would have been subjected to the tax. This would have had the unjustified consequence of undermining investment decisions that pension plans had made years earlier in good faith.

NCPERS members and their coalition partners vigorously opposed the change, arguing that retired public servants such as teachers, police officers, and firefighters would have borne the brunt of the change, in the form of reduced pension fund portfolio values. Together,

CONTINUED ON PAGE 6

NCPERS Around the Regions

As a new Monitor feature, we will highlight pension news in one state in each of these four regions each month.



THE WEST: Arizona

When the Arizona Education Association saw a need to demystify public pensions for an audience of state legislators, it turned to NCPERS for a helping hand.

On December 4, 2017, NCPERS Executive Director and Counsel Hank Kim was a featured speaker at the Arizona Pension Academy, providing a national overview of best practices. The academy drew a number of state legislators and their staff members for six hours of total immersion in public pension policy and practices.

Stephanie Parra, the AEA's director of government relations, organized the program after state legislators reached out to her for ideas on how to gain a deeper understanding of public pensions. She in turn connected with NCPERS and the National Public Pension Coalition for help in developing the program content.

"As we were preparing for the 2018 legislative session, we knew it would be helpful to present information on public pensions in a digestible way," Parra said. But since pensions are only part of her portfolio at AEA, she knew she would benefit from tapping into the expertise represented by NCPERS and NPPC.

"I have received nothing but positive feedback from academy attendees. It was a rich discussion and outline of the local pension systems," Parra said. The program helped AEA's allies and advocates become well-versed in public pension issues. Topics covered included an overview of how Arizona's public pensions are structured and operated, how actuarial projections work, the legal status of Arizona's public pensions, and trends impacting pensions in the state and around the nation.

Other speakers included Bailey Childers of the NPPC, Dan Doonan of the National Education Association, Ed Koebel of Cavanaugh, Peter Mixon of Nossaman, Paul Matson of the Arizona State Retirement System, and Jared Smout of the Arizona Public School Retirement System.

THE MIDWEST: Wisconsin

Face-to-face interaction with lawmakers is the time-tested way to ensure that legislators and their staff members understand when issues are important to their constituents. So when an obscure provision of the 2017 tax bill threatened Wisconsin's public pension plans, the State of Wisconsin Investment Board took its case directly to Speaker of the House Paul Ryan (R-Wis.)

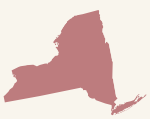
SWIB's efforts were influential in eliminating the unrelated business income tax (UBIT) from the tax legislation that Congress passed December 20, 2017. President Trump signed it into law two days later.
"SWIB would have had a heavy and expensive compliance burden if the final tax bill had imposed UBIT on public pension plans," said Rochelle Klaskin, SWIB's chief legal counsel. With no in-house tax specialists, SWIB faced "a long and expensive journey" to analyze thousands of investments that would have potentially

been taxed retroactively, and then file tax returns. And the process wouldn't have stopped there. Portfolios would have had to be restructured, hundreds of calls to general partners would have been made, and ongoing legal, tax, and due diligence costs would have been imposed.

Given the stakes, "it was an easy call to drop everything and fly to Washington on an issue that could have reduced our returns and ultimately the dividends to our retirees," Klaskin said. A delegation met with Speaker Ryan on Dec. 1 to make the case that the UBIT tax would have been unconstitutional and changed more than 40 years of IRS precedent.

Among their key messages: The Wisconsin Retirement System is a pillar of the state's economy, serving more than 620,000 participants and their families, or 10% of the state's population. State retirees should not have to bear the brunt of a new tax imposed by the federal government that would reduce returns.

THE NORTHEAST: New York



A broad and diverse coalition of labor organizations, New Yorkers Against Corruption, worked to defeat the state's 2017 ballot initiative to hold a constitutional convention. New Yorkers resoundingly rejected the initiative on November 7, with more than 80% voting no.

By law, New York voters must decide every 20 years whether to open the state's founding documents to potentially sweeping revisions by holding a constitutional convention. Conceived of by New York's founding fathers as a safety valve for ensuring good governance, constitutional conventions also have the potential to unleash mischief and destruction.

More than 100 organizations came together in opposition to the constitutional convention, ranging from the American Civil Liberties Union to the New York State Rifle and Pistol Association, and from Planned Parenthood to Right to Life. Labor organizations made up a significant portion of the coalition.

"Our most important message was that special interests and political insiders would control the constitutional convention," said Jordan Marks, executive director of New Yorkers Against Corruption. Coalition members were deeply concerned about a lack of transparency, unchecked costs, and the absence of an agreed-upon framework for the constitutional convention. All organizations stood to lose something they cared about, Marks added.

For public pensions, the risks were unacceptably high. The New York State Constitution, written in 1938, includes strong labor protections, including pension rights. New York held its last constitutional convention in 1967, a costly affair that ultimately yielded nothing. All the changes agreed upon during the proceedings were eventually voted down at the ballot box.

THE SOUTH: Kentucky

Since his election in 2015, Republican Governor Matt Bevin has argued that defined-benefit plans are not viable. He has advocated shifting future public employees into defined-contribution plans, such as 401(k) plans.

But Bevin's relentless attacks on public pensions fell flat, and his plan to convene a special General Assembly legislative session in 2017 to address pension reform never gained traction. Members of his own party criticized his approach, and 45 of the 64 Republicans in Kentucky's House of Representatives petitioned him in early December not to call the special legislative session before yearend.

Bevin wanted a special legislative session because he has asserted that the pension issues are too complicated to address during the regular session that began January 2, 2018. Kentucky's pensions have suffered from years of chronic underfunding by the state government, even as plan participants have continued to contribute their fair share.

In October, the governor proposed a pension reform bill that would have transitioned public employees from defined-benefit plans to 401(k)-like plans. Many state senators backed the bill, but it lacked support in the House. Remarkably, a study of the legislation's impact on Kentucky's Teacher Retirement System found that it would increase costs to taxpayers by $4 billion over 20 years. In other words, this legislation would cost more while providing less to Kentucky teachers in retirement.

Efforts to chip away at pension benefits also hit resistance. In late December, state Attorney General Andy Beshear dealt a blow to a Republican-backed proposal to suspend cost-of-living adjustments for current retired teachers. Suspending retirees' annual 1.5 percent COLAs for five years starting in July 2018 violates state law, he said.

Teachers have argued that the adjustments are illegal because retirees have already contributed to their cost-of-living benefits while working. ◆

NCPERS Gears Up to Take Unified Message to Hill in 2018

Photo Illustration © 2018, Depositphotos

Policy issues impacting public pensions will be front and center throughout January as NCPERS holds two of its hallmark events: The semi-annual State & Federal Legislation Webcast and the 2018 Legislative Conference. Now is the time to sign up to be among the hundreds of public pension leaders who will participate in these important programs.

First up will be the semiannual State & Federal Legislation Webcast, a free one-hour program that will begin at 1 pm eastern time on Tuesday, January 16. I will be moderating this session with two of our most well-received speakers: Bailey Childers, executive director of the National Public Pension Coalition, and Anthony Roda, a partner with the law firm of Williams & Jensen.

The following week, hundreds of pension trustees, administrators, and other professionals will be in Washington for the Legislative Conference, running January 28-30. Featuring a blend of education, policy discussion and networking, the Legislative Conference is vital to how we take a unified message to Capitol Hill and the regulatory agencies.

We start the Legislative Conference on Sunday evening, January 28, with a networking reception.

Monday, January 29, is devoted to issues that we will address during Capitol Hill and agency visits. We will hear the outlook for the 2018 mid-term elections; gain insights into how to advance out agenda in a highly partisan environment; learn about the priorities of House and Senate leadership, key congressional committees; and absorb the latest research on benefits and pensions.

Monday's program is packed with speakers, including columnist Cal Thomas, renowned lawyer and crisis manager Lanny Davis, former Senator Trent Lott, and representatives of the Treasury Department, House Ways & Means Committee, Senate Finance Committee, Gallagher Benefit Services, and The Segal Group, among others.

On Tuesday, January 30, we kick off a full day of Capitol Hill visits with breakfast with lawmakers and their staffs in the Capitol.

I cannot overstate the importance of participating in the Legislative Conference. The stakes are high. While we should be proud of and celebrate the victory on UBIT (see related article in this issue), unfortunately the UBIT issue and other threats to public pensions are not entirely dead. Congressional leaders are already planning a new tax bill to fix errors in H.R. 1 and there are talks of a benefits bill for 2018. Either of these could be a new vehicle for UBIT and/or other harmful provisions. Additionally, the impending retirement of Senate Finance Committee Chairman Orrin Hatch (R-Utah) could prompt him to push harder than ever for some of his anti-pension initiatives as he writes his legacy.

I have seen over and over how powerful it is when trustees, administrators, plan participants, and beneficiaries tell their story to lawmakers and regulators.

I have seen over and over how powerful it is when trustees, administrators, plan participants, and beneficiaries tell their story to lawmakers and regulators. You have the unparalleled ability to provide real-life examples of how public pensions matter to communities – and how we can unleash the power of this time-tested vehicle to provide retirement security for all.

Registration for both the Webcast and the Legislative Conference is now open at www.ncpers.org. I hope to see you there! ◆

Sweeping Tax Legislation and Public Pension Plans

By Tony Roda

Photo Illustration © 2018, Depositphotos

On November 1, the House Ways and Means Committee released H.R. 1, the Tax Cuts and Jobs Act of 2017. With changes that would affect almost every taxpayer, the over 400-page bill was quickly scoured by every industry group, major corporation, taxpayer group, charity, and yes, the public pension community.

At first glance, the news was good for public plans. The Public Employee Pension Transparency Act (PEPTA) and the annuity accumulation pension plan were not included. Likewise, Rothification, a requirement that all future contributions to defined contribution plans be made with after-tax dollars, was not part of the package, nor was a repeal of special contribution limits for 457(b) and 403(b) plans. However, tucked into the legislation was a provision that would subject certain investments of public pension plans to the unrelated business income tax (UBIT), section 5001.

The UBIT proposal was included in tax reform legislation introduced in 2014 by then-Ways and Means Chairman Dave Camp (R-MI). The provision was described as a "clarification" of current law, both in 2014 and in H.R. 1. However, there was a big difference on the revenue analysis. In 2014, the Joint Committee on Taxation scored the UBIT provision as raising $100 million in new revenue over 10 years. In H.R. 1, it was scored as raising $1.1 billion, which immediately made it a much more attractive provision.

Inclusion of the UBIT provision kicked off a frenzied six-week period in which state and local governmental pension plans from around the country emailed, telephoned and met directly with key staff and members of the House Ways and Means Committee, Senate Finance Committee and House and Senate Leadership. The three national groups – NCPERS, NASRA and NCTR – conferred daily by email and every Monday morning by phone. NCPERS was also able to enlist the support of private equity firms, which proved to be very important.

The House moved with such speed that we were unable to effect a change in the UBIT provision. Moreover, the House Ways and Means Committee's tax staff firmly believes that section 5001 is a simple clarification of existing law and that UBIT should be applied to state and local pension plans. Their argument is that public pensions are qualified plans under Internal Revenue Code (IRC) section 401(a) and section 401(a) is referenced in the UBIT section of the tax code. Public plans take a different position on this question. We strongly believe that state and local governmental pension plans are exempt from all taxes by virtue of IRC section

CONTINUED ON PAGE 7

PUBLIC PENSIONS CONTINUED FROM PAGE 1

we made a compelling case that the change in tax treatment would have the perverse consequence of constraining investment options. This, in turn would have made it more difficult for governmental pension plans to continue on the path of steadily improving their funding and sustainability.

> *There is no doubt that the lobbying efforts conducted by individual NCPERS members made a decisive difference.*

The status of this ill-advised tax was touch and go for more than six weeks, as UBIT survived in the House bill all the way to the conference. There is no doubt that the lobbying efforts conducted by individual NCPERS members made a decisive difference. While many NCPERS members emailed and called their Congressional delegation, it was the in person lobbying by certain plan representatives who flew into Washington, DC and participated in Hill meetings that pushed us past the finish line. Though it is sometimes dangerous to let logic cloud your vision in Washington, D.C., in this case logic did prevail and UBIT was stripped away for now.

That is why attending the NCPERS Legislative Conference at the end of the month is a must. Attend the all-day briefing session on Jan. 29 so you're up to speed on our federal issues of concern and then join us as we lobby Congress on Jan. 30. ◆

TAX LEGISLATION CONTINUED FROM PAGE 5

115, which excludes from gross income certain income of entities that perform an essential government function.

As debate moved to the Senate, we focused on making contacts there to keep the provision out of the Senate version of the bill. This effort proved successful. That set up a House-Senate conference committee. The UBIT provision could have emerged from the conference in one of three ways: (1) the original House provision; (2) the House provision modified to provide a so-called soft landing (e.g., grandfathering existing investments, delaying the effective date and/or applying UBIT to only a very narrow set of investments); or (3) no provision.

In the final days our lobbying effort re-contacted all of the key Congressional offices through the national groups and directly through the members' own state and local pension plans. The message was straightforward: Keep the UBIT provision out of the final bill. At 5:30pm on Friday, December 15, the conference report was released and we were pleased to see that the UBIT provision was not included in the final legislation.

This remarkable victory was made possible only because of the willingness of NCPERS' members to drop their important day-to-day work and write an email, pick up a phone or get on a plane to travel to Washington, D.C. In some cases, they did all of the above. It was a tremendous team effort.

The conference report on H.R. 1 was approved by the House on December 19 by a vote of 227-203, with all Democrats and 12 Republicans voting against passage. The next morning the Senate voted along party lines, 51-48, to approve the House-passed bill with three minor changes. Those changes were unrelated to public pension plans. The House then gave final Congressional approval to the Senate-passed conference report. President Trump signed the legislation into law on December 22. The tax legislation is now P.L. 115-97.

UBIT is likely to reappear in 2018 as Congressional leaders have stated their intentions of doing a tax technical corrections bill and/or a benefits bill sometime this year. UBIT (and any of the other negative items) may be included in either bill. Please be assured that NCPERS will remain vigilant on any future legislative attempts to impose the UBIT tax on state and local governmental pension plans. ◆

Tony Roda is a partner at the Washington, D.C. law and lobbying firm Williams & Jensen, where he specializes in legislative and regulatory issues affecting state and local pension plans. He represents NCPERS and individual pension plans in California, Ohio, Tennessee and Texas.

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2018 Conferences

January

Legislative Conference
January 28 – 30
Washington, DC

May

NCPERS Accredited Fiduciary Program (All modules)
May 12 – 13
New York, NY

Trustee Educational Seminar
May 12 – 13
New York, NY

Annual Conference & Exhibition
May 13 – 16
New York, NY

June

CIO Summit
June 14-15
Chicago, IL

September

Public Pension Funding Forum
September 10 – 12
Cambridge, MA

October

NCPERS Accredited Fiduciary Program (All modules)
October 27 – 28
Las Vegas, NV

Public Safety Conference
October 27 – 31
Las Vegas, NV

The Voice for Public Pensions

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NCPERS 1941

PERSist

The Voice for Public Pensions

Winter 2018 | Volume 31 | Number 1

Message from the President

Daniel Fortuna
NCPERS President

NCPERS is ringing in 2018 with a robust online and onsite education program. NCPERS will host at least two webinars and the NCPERS Legislative Conference in the first quarter. Additionally, in the second quarter we will host the NCPERS Accredited Fiduciary (NAF), TEDS, and the Annual Conference & Exhibition (ACE) programs in May and a new CIO workshop in June.

The first webcast of 2018 reviewed legislative activities at the state and federal levels including the successful lobbying of against the inclusion of the UBIT in the tax bill and previewed upcoming state and federal legislation that will impact public pension plans. Held on January 16, NCPERS executive director, Hank Kim, moderated the live webcast, with Bailey Childers, the executive director of National Public Pension Coalition, and Anthony Roda, partner at Williams & Jensen.

The annual NCPERS Legislative Conference will take place on January 28 to 30, 2018, where members will meet in Washington, D.C. for two and half days of advocacy, strategy, and networking on the most pressing policy issues facing public pension funds in 2018. At the end of 2017, public pensions celebrated a major victory in excluding the Unrelated Business Income Tax (UBIT) provision in the final tax bill, H.R. 1. This victory taught us the importance that in-person lobbying can have on our Congressional delegations. I urge you to attend the Legislative Conference and join us on Capitol Hill.

The Center for Online Learning will continue to provide educational opportunities in February and March. On February 13, 2018, at 1:00 pm to 2:00 pm EST, NCPERS will be hosting a webinar on the 2017 NCPERS Public Retirement Systems Study and its dashboard.

CONTINUED ON PAGE 8

In This Issue

The top five ways modern technology can help pension agencies realize their mission-critical goals

By Diann Clift

While every public pension agency has their unique differences, a common purpose unites them: to maintain the financial security of the trust fund and provide exceptional service to external stakeholders. In terms of protecting pension funds, there are numerous investment strategies to close the funding gap: using asset monetization and dedicated revenue sources, issuing well-designed pension obligation bonds, closing tax loopholes, among other tactics. Investment strategies aren't the only way to maintain the sustainability of the plans, however. By updating the technology that is used to administer pension benefits, pension agencies can ensure financial security while simultaneously achieving customer service excellence.

Retirement planning tools available on mobile apps and web self-service portals illuminate member benefits and foster retirement readiness.

Below are five best practices for how technology can help pension agencies achieve their mission-critical goals.

1. **Invest in a Framework-based Solution**
   Considering the complexity and constantly changing nature of retirement law, pension agencies should strongly consider replacing their legacy systems with technology that can easily evolve and scale. Strategic investments in modern technology is also fiscally responsible. According to an article in Government Technology, "Government at all levels remains shackled to legacy systems, which can account for 70 to 80 percent of IT dollars."-

2. **Improve member centricity**
   There are incredible opportunities to improve member experience through technology. Focus on technical solutions that utilize multiple communication methods to ensure your agency keeps pace with other service industries. This means a chatbot integrated within web self-service portals, mobile-based offerings, and member surveys, among other things. Sophisticated levels of service delivery is clearly a trend among pension agencies, with 14 percent of pension agencies polled in the 2016 NCPERS Public Retirement Systems Study stating they are considering investing in a member web portal.

3. **Enhance member communication and outreach**
   A pension administration solution should illuminate member benefits and foster retirement readiness by offering full-service retirement planning tools. Look for member self-service portals that offer personal wealth management features. These types of tools help members visualize the impact of contributions and other deductions on their paycheck, while also providing a holistic picture of their personal wealth by combining other retirement accounts (e.g., 401K, IRA, etc.) into one dashboard.

CONTINUED ON PAGE 8

Diann Clift *is the Business Development Manager at Sagitec Solutions and has extensive experience in the public pension industry. Diann is a product evangelist, spearheads acquisition activities and is responsible for executing Sagitec Solutions' corporate strategy for its Neospin™ pension administration solution. With more than 35 years of technology and project management experience in the government sector, private sector and the public pension fund market, Diann has served on the Boards of the Public Retirement Information Systems Management organization as well as Indiana Pension Systems, Inc. Diann has maintained a PMP certification with the Project Management Institute for 12 years and she actively participates in the following public pension fund organizations: NCPERS, NASRA, NCTR, SACRS, PRISM, NPEA, CALAPRS, and Missouri MAPERS.*

Investors Take A Cue From Professional Football in Encouraging Board Diversity

By Maureen O'Brien

This time of year, public pension funds, multiemployer funds, and other individual and institutional investors are busy submitting shareholder proposals that investors will vote on next spring at corporate annual shareholder meetings. One proposal garnering increased attention is board diversity. Investors are asking companies to take steps to increase the number of women and minorities on corporate boards of directors.


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Most investors advocating for board diversity are working through coalitions. The Midwest Diversity Initiative, comprised of regional institutional investors, is reaching out to regional companies. The 30% Coalition – a group comprised of 90 members, including institutional investors with $3.2 trillion in assets under management – is tracking proposals to upwards of 50 companies.

The New York City Pension Funds sent a letter to 151 companies in September asking they provide disclosures on the race and gender composition of their boards of directors. State Street and Vanguard announced expectations that companies either increase board diversity or provide an explanation on their future plans to address board diversity. If not, the passive investment behemoths will vote out directors at the companies' annual shareholder meetings.

All of this momentum is a necessary ingredient for change given the challenging nature of refreshing corporate boards of directors. The average tenure for a director is six to 10 years and an enforced mandatory retirement age is rare in corporate America. When board seats become available, a typical recruitment pool provided by a professional services firm or references from sitting directors tend to skew white and male.

That's why investors are encouraging companies to adopt the Rooney Rule. Adopted from the NFL, the Rooney Rule states the companies will include diverse nominees in every candidate pool for an open board seat. The NFL established the Rooney Rule in 2003 to require minorities be included in every recruitment pool for head coach searches. The more diverse candidates in the pipeline, the better the odds of selection. Three years after the Rooney Rule was adopted by the NFL, the percentage of African American coaches jumped from 6% to 22%.

Companies seem receptive to the diversity aims. LeanIn.Org and McKinsey & Company released a study last month on gender

CONTINUED ON PAGE 8

Maureen O'Brien *is Vice President and Corporate Governance Director at Segal Marco Advisors. She joined the firm in September 2011. At Segal Marco, she engages companies on corporate governance issues and oversee the proxy voting service. Ms. O'Brien serves on the Advisory Council to the Council of Institutional Investors.*

Ms. O'Brien's work in shareholder advocacy began in 2003 as a Research Analyst for the Investor Responsibility Research Center. Ms. O'Brien previously served as Head of Engagement at Conflict Risk Network, where she held dialogues with companies operating in Sudan and other conflict zones. In a previous role, she was Research Director at the Center for Political Accountability, a non-profit, non-partisan organization, where she promoted transparency in corporate political spending.

Ms. O'Brien co-founded LINC Negotiations, a Washington, D.C.-based consultancy that provided training in negotiation and mediation. She holds an M.A. from American University in Washington, D.C. and B.A. from the University of Missouri-Columbia.

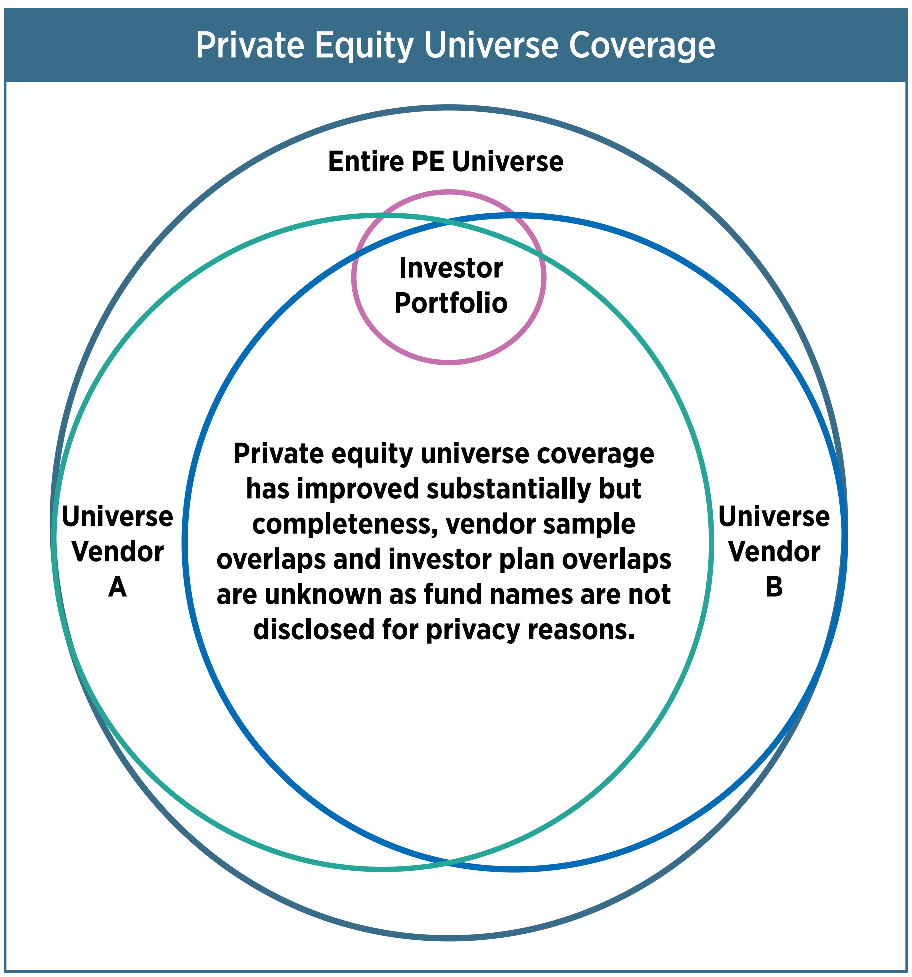
Private Equity Program Benchmarking: How Ya Doin'?

By Paul Finlayson

Photo Illustration © 2018 Depositphoto.com

With any investment, we need to gauge the success of our decisions. One of the most basic and enduring tools of investment performance measurement is benchmarking. However, in the world of private equity (buyouts, venture, debt, etc.), traditional notions of benchmarking break down primarily due to one basic fact: private equity is, well, private.

A complete universe of private equity fund names is unattainable as not all funds are required to register. Great strides have been made in universe construction and the academic scrutiny of commercial databases is well-documented. Data providers are very close to mapping what is arguably a majority of the universe. But the essential problem remains: private equity is private, and as such, fund level information is not readily available for many funds. The better constructed universes will not disclose fund names and fund results, as the providers protect the privacy of the partnerships. So good data is available, but by nature it cannot be completely transparent.



The problem of not knowing the names of the funds you are comparing yourself to is compounded by dispersion. The dispersion of private equity partnership and aggregate program performance is wider than other asset classes due to timing, style/vintage decisions, and partnership selection decisions. Asset owners can control for portfolio allocations to vintage years and styles to create a custom benchmark. But that privacy problem remains: you don't know fund names in the cohort you select and that brings up the problem of access.

The benchmark you construct using vintage and style parameters will likely include partnerships in which you did not have access to participate. In the closed world of private equity, the managers (general partners) have influence in selecting their investors (limited partners). Therefore, you as the program manager cannot determine if the benchmark you construct represents your true opportunity set. Everyone does not have equal access to the partnerships represented in universes and you have no way to exclude individual partnerships.

Since private equity is private, the development of valuations is performed by the partnership firm and can be delayed for months at a time. This results in reporting latency, making meaningful current period comparisons to a public portfolio problematic.

CONTINUED ON PAGE 8

After Years of Neglect, City Must Pay Up

By Robert D. Klausner, NCPERS General Counsel

In 1993, the Board of Trustees of the City of Harvey Firefighters' Pension Fund filed a complaint against the City of Harvey for failure to adequately fund the pension fund between 1988-1994 and failure to deposit levied and collected taxes into the fund. In 1996, the parties reached a settlement agreement that required Harvey to repay the amount due ($912,652) and Harvey ensured that in the future it would pay all taxes into the fund as required by the Code.

In 2010, 15 years after reaching this agreement, the Board of Trustees once again filed suit against the City of Harvey for failure to comply with the Code, including breach of their 1996 settlement agreement. In their 2015 ruling, the Trial Court granted the Board's motions for declaratory judgment, injunctive relief, and motion to compel enforcement of the settlement agreement. However, the Trial Court failed to find that the Board's finances rose to the level of the "verge of default or imminent bankruptcy" standard, despite the testimony of a number of individuals that the Fund would be unable to pay out benefits within the next five to ten years. This appeal followed.

Photo Illustration © 2018 DepositPhotos.com

Ultimately, the Illinois Supreme Court held that the City of Harvey must take responsibility for their complete lack of ability to properly manage its own finances as well as those of the Plan. Disagreeing with the Trial Court, the Supreme Court held, "Combining the ever-decreasing assets in the Pension Fund, the consistent lack of contributions, and the lack of evidence to support a changing of financial habits by Harvey, this court is convinced that the Pension Fund is on the verge of default." In addition to holding that the Fund was in a dire financial situation, the Court upheld the Trial Court's determination that the Code creates a valid and enforceable statutory right to funding. While the Code allows the City to exercise some discretion in its ability to change the funding formula, "Harvey must comply with the Pension Code in effect for any given year. There can be no dispute that Harvey has completely failed to do this and that the discretion afforded [to] the City has been completely abused."

In disputing the Trial Court's final determination of damages, Harvey argued that the City should be responsible for only the amount reflected on the most recent actuarial valuation, and not a sum of the damages from the previously missed annual actuarial valuations. Additionally, the City argued that because an enrolled actuary didn't actually perform valuations for 2009, 2010, or 2012, as required by the Code, they should not be required to levy taxes for those years. The Supreme Court disagreed with the City's arguments, citing the Trial Court's reasoning, "if Harvey has actuarially funded the full amount in any fiscal year, the actuarial requirement for the following year would be lower because the unfunded liability would be lower." at 34.

Throughout their opinion, The Supreme Court stressed the overwhelming lack of effort by the City to make contributions to the fund, "in accordance with the specific levied amounts, or any reasonable amounts whatsoever." at 29. As a result of Harvey's total disregard for their responsibilities to the Pension Fund, the Fund is having to use its members' contributions in order to pay benefits. The Court recognized the dire state of the Fund and their opinion reflects the severe consequences that stem from a refusal by the City to adhere to the Pension Code.

Board of Trustees of City of Harvey Firefighters' Pension Fund v. City of Harvey, 739 N.E. 3d 636 (Ill. App. 2017)

NCPERS Helps Lead Successful Outcome in Investor Litigation in the U.S. Court of Appeals for the Second Circuit

NCPERS led a group of institutional investors in a friend of the court (amicus curiae) brief on a case to preserve the fraud on the market presumption. The United States Court of Appeals for the Second Circuit Court issued an opinion on *Waggoner v. Barclays PLC*, No. 16-192-cv (2d Cir. Nov. 6, 2017), affirming the district court's decision to certify the case as a class action.

CONTINUED ON PAGE 10

Does Your Pension Have a Foreign Withholding Tax Recovery Strategy?

By Len. A. Lipton

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Is my pension fund leaving money on the table?

As U.S. stock indexes approach new heights, pension investment managers are increasingly seeking opportunity abroad. While there is value to be found on foreign shores, U.S. tax-exempt entities must take heed: their favorable tax status does not automatically extend overseas. Dividend and interest income on foreign securities is often subject to withholding taxes approaching 35%, a rate suffered by tax-exempt and non-exempt entities alike.

Fortunately, tax-exempt investors can find recourse under double taxation treaties. By reclaiming the difference between the 'statutory' and 'treaty' rates, pensions can add an average of 30-55 basis points of risk-free performance. Recovering over-withheld taxes is not only profitable, it is also prudent. Trustees have a fiduciary responsibility to maximize fund performance, and must work to obtain all possible entitlement recovery opportunities.

What is the process for recovering over-withheld taxes?

While withholding tax recovery can meaningfully improve investment returns, the process is often complex to administer. Requirements vary considerably among markets. Investors are required to complete country-specific documents - often in the local language - and provide evidence of residency and security ownership on dividend record date. Signatures must be secured and forms distributed through one or more counter-parties in the global custody chain.

Due to the complexities involved, many custodians and brokerages do not offer a comprehensive tax recovery service. The burden thus falls to the investor. Should they fail, the entitlements will be lost, essentially donated to the foreign government once the Statutes of Limitations expire.

How much is available for reclamation?

As tax-exempt entities, pensions are often eligible to recover the entire withheld amount. When expressed as a percentage of the total dividend payment, entitlements range from 35% in Switzerland, 30% in Belgium, Finland, and Sweden, 26.275% in Germany, and 25% in Canada. Taking action is critical. As tax-exempt entities, pensions cannot offset foreign withholding via a tax credit.

What securities are eligible?

Withholdings from both American Depositary Receipts (ADRs) and shares purchased in foreign markets are eligible for recovery. ADRs are of particular interest. Because investors purchase ADRs on U.S. exchanges—especially when buying commonplace names like Anheuser Busch, Bayer, Nestle, and Unilever—they may not realize that the dividends are subject to withholding tax in the foreign jurisdiction and thus recoverable.

__Len A. Lipton__ joined GlobeTax in 2004. Mr. Lipton manages the firm's sales and marketing activities for the Americas. His responsibilities encompass promotion of the company's services to investors and financial institutions, including spearheading business development activities to the pension community.

CONTINUED ON PAGE 10

	Belgium	Canada	Finland	Germany	Sweden	Switzerland
Statutory Rate (%)	30	25	30	26.375	30	35
Statute of Limitations	5 years	2 years	5 years	4 years	5 years	3 years

Four Ideas on Choosing the Right ESG Manager

By Mamadou-Abou Sarr

Investors new to the ESG (environment, social and governance) space may find it a challenge to know where to start when seeking out an ESG strategy, as there seems to be an ever growing set of strategies available in the market place. However, there is no one-size-fits-all approach by managers to incorporate ESG principles into the investment process.

Photo Illustration © 2018 Depositphoto.com

The challenge is to identify which products are high quality, leveraging meaningful data and analysis in a thoughtful, innovative way that meets the investor's needs. There is a myriad of different approaches to ESG investing which stem from the investment organization's philosophy. When assessing an ESG manager, there are four key points to bear in mind:

- **RESPONSIBLE ORGANIZATION:** A small subset of asset management firms have responsible investment principles engrained in the firm culture, philosophy and mission statement. It's important to assess the firm's overall commitment to responsible investing. This commitment can be deduced from the points below.

- **DEDICATED ESG INVESTMENT PROFESSIONALS:** Many firms focused on ESG investing have dedicated analysts who identify ESG issues relevant to specific regions and industries. They stay abreast of evolving regulations and policies, evaluate ESG data providers and systems, and educate their internal investment professionals. Alternatively, some firms incorporate ESG analytics into the traditional security analysis, embedded in the research process of the security analyst.

- **ESG RESEARCH:** Does the firm leverage ESG data and analytics in security analysis from a risk perspective? While many asset managers have the ability to screen out specific securities and industries based on client restrictions, few managers incorporate ESG analysis across investment decisions as an engrained component of portfolio construction.

- **SHAREHOLDER ADVOCACY:** With a vested interest in a company's ESG performance, many investment managers will work with portfolio companies to influence their ESG profile. There are several methods of working with companies to improve ESG characteristics such as voting shareholder proxies, engaging directly with company management, and engaging with competitors to enhance industry standards.

ONE MORE KEY: KNOW YOUR ESG INVESTING PURPOSE

With such a broad spectrum of ESG options, the number of choices can be overwhelming. The foremost step in evaluating which approach is appropriate for any given investor is defining the purpose or goal of the ESG investments. Do you want to tilt toward environmental, social or governance issues, or all three equally? ESG investment approaches can result in varying levels of success.

CONTINUED ON PAGE 11

Mamadou-Abou Sarr *Mamadou-Abou Sarr is the Global Head of Environmental, Social and Governance (ESG) investing at Northern Trust Asset Management where he is responsible for ESG innovation and product development across our full array of asset classes and capabilities for both institutional and wealth management investors. Mamadou has a key role within Northern Trust to proactively develop new ideas to ensure that ESG thinking remains central to our business development.*

Mamadou received his B.A. in economics from the Université Jean Monnet and holds a Specialised Master in international project management from the European School of Management (ESCP Europe), Paris. Additionally, he holds the Investment Management Certificate (IMC) and received the Islamic Finance Qualification (IFQ), Mamadou is an Associate of the Chartered Institute for Securities & Investment (ACSI) and a member of the CFA UK Institute. He was named in Crain's Chicago Business, "Crain's Chicago Top 40 under 40" for 2017.

MESSAGE FROM PRESIDENT THE CONTINUED FROM PAGE 1

William SaintAmour, from Colbalt Community Research, will discuss the findings of our survey and demonstrate how to use the dashboard to wield and search the survey results so that the data is refined to your specifications.

To register for any of our webinars or conferences, please click on the links inside the article. We look forward to "seeing you" at our online and in person events! ◆

TOP FIVE CONTINUED FROM PAGE 2

4 **Bolster organizational efficiencies**
To help you achieve operational cost effectiveness, pension administration systems should leverage automated workflow management to the greatest extent possible. This functionality improves internal efficiency, and the associated metrics and reports promote continuous process improvement. Modern solutions should also incorporate knowledge management and organizational learning to ensure staff have the necessary information and tools to perform their jobs competently.

5. **Cloud Hosting Options**
Considering the prevalence of cloud hosting, look for a pension administration solution that will allow your agency to adopt an infrastructure on demand approach. By hosting your solution on the cloud, you can decrease labor, increase scalability, and pay for what you use instead of what you have.

By following these best practices in conjunction with the aforementioned investment strategies, pension agencies can fix the funding gap, ensure a secure retirement for their members, and provide superior customer service. ◆

INVESTORS CONTINUED FROM PAGE 3

equality in the workplace. The study, Women in the Workplace 2017, examined 222 companies and found company commitment to gender diversity is at an all-time high for the third year in a row. The Wall Street Journal recently reported that Spencer Stuart, an executive recruitment firm, found that the number of women and minority directors on boards hit a record high in 2017. S&P 500 firms placed 397 independent directors this year and half of them were diverse.

The business case for diversity is supported by recent studies from the law firm Paul Hastings, the Peterson Institute for International Economics, Credit Suisse, McKinsey and others. However, not all studies provide a rosy picture. In May, Wharton management professor Katherine Kline examined the academic research and reported that board gender diversity has either a weak relationship with board performance or no relationship at all. Still, academic research has yet to make the business case for boards comprised solely of white males. ◆

PRIVATE EQUITY CONTINUED FROM PAGE 4

So what are plan managers doing? Even in 2018, most continue to use public markets index returns plus a premium expectation. The data is readily available and this benchmark provides a glimmer of the success or failure of the decision to deploy to private equity as opposed to public markets. However, it tells nothing of the success of selection or portfolio constriction decisions.

Public markets equivalence methods can tell if you have outpaced the public markets. Program universes can tell how you did versus other investors' programs. Custom benchmarks can be created considerate of the issues noted above. But given the inherent challenges of private equity benchmarking, the question of "how ya doin'" must be answered with "compared to what?" ◆

Disclosure:

About Northern Trust
Northern Trust Corporation (Nasdaq: NTRS) is a leading provider of asset servicing, wealth management, asset management and banking to corporations, institutions, affluent families and individuals. Founded in Chicago in 1889, Northern Trust has offices in the United States in 19 states and Washington, D.C., and 22 international locations in Canada, Europe, the Middle East and the Asia-Pacific region. As of June 30, 2017, Northern Trust had assets under custody of US$7.4 trillion, and assets under management of US$1.03 trillion. For more than 125 years, Northern Trust has earned distinction as an industry leader for exceptional service, financial expertise, integrity and innovation.

Northern Trust Corporation, Head Office: 50 South La Salle Street, Chicago, Illinois 60603 U.S.A., incorporated with limited liability in the U.S. Global legal and regulatory information can be found at https://www.northerntrust.com/disclosures. ◆

Paul Finlayson *is a Senior Vice President and Alternative Assets Service Product manager with Northern Trust.*

LEGAL REPORT CONTINUED FROM PAGE 5

Investors have long relied on the "fraud-on-the-market" presumptions, a principle providing that the price of securities in a well-developed ("efficient") market generally reflects all publically available material information about the company. Therefore, if a material public misrepresentation about the company distorts stock prices, anyone who purchases stock at the distorted price is presumed to have relied on the misrepresentation. While the presumption has come under scrutiny in recent years, this decision is a huge victory for plaintiffs and institutional investors rights in general.

Among the most important points of the decisions, the court held that the plaintiff's burden to show market efficiency in order to benefit from the fraud presumption of reliance at class certification is light. Indirect evidence of market efficiency is sufficient to meet the burden. Additionally, should the defendants wish to rebut the presumption, they must do so by a preponderance of the evidence. Finally, the plaintiff's burden of proving that damages can be calculated on a class wide basis can be overcome without performing it in detail, but rather simple that the calculation is possible.

The NCPERS brief was a joint effort with Bernstein, Litowitz, Berger & Grossman; Klausner Kaufman Jensen & Levinson and Hank Kim. ◆

This article is a regular feature of PERSIST. ***Robert D. Klausner****, a well-known lawyer specializing in public pension law throughout the United States, is General Counsel of NCPERS as well as a lecturer and law professor. While all efforts have been made to insure the accuracy of this section, the materials presented here are for the education of NCPERS members and are not intended as specific legal advice. For more information go to www.robertdklausner.com.*

FOREIGN WITHHOLDING TAX CONTINUED FROM PAGE 6

Is there any risk?

For pensions, the only risk is inaction. Despite the delays to Fiduciary Rule implementation, there has never been a question that trustees have a fiduciary responsibility to recover all eligible entitlements. Evidencing this point, the DoL's Employee Benefits Security Administration has issued findings to pension funds that failed to recover foreign withheld taxes. In recent years, GlobeTax has witnessed a surge in inquiries from tax-exempts who both need assistance fulfilling audit requirements and wish to proactively demonstrate fiduciary responsibility.

What are the next steps?

In today's era of pension shortfalls, every basis point counts. To maximize performance and ensure fulfillment of fiduciary responsibility, speak with your tax advisor, custodian(s), and fund manager(s) to confirm that a complete tax relief and reclamation strategy is in place. ◆

FOUR IDEAS CONTINUED FROM PAGE 7

While qualitative, bottom-up research can provide more targeted ESG exposures and a more holistic view on a company, it can be more costly to implement. The use of third-party ESG data can be an effective way to reduce management fees, though may lack details on materiality and directionality. If third-party data is utilized, independent assessment and verification would be prudent.

We are of the firm belief that investors can benefit from seeking ESG-focused managers and do not need to forego performance to invest well. However, discernment is critical in the manager selection process. ◆

With contributions from Trent Cohan

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Calendar of Events 2018

January

Legislative Conference
January 28 – 30
Washington, DC

May

NCPERS Accredited Fiduciary Program (All modules)
May 12 – 13
New York, NY

Trustee Educational Seminar
May 12 – 13
New York, NY

Annual Conference & Exhibition
May 13 – 16
New York, NY

June

CIO Summit
June 14-15
Chicago, IL

September

Public Pension Funding Forum
September 10 – 12
Cambridge, MA

October

NCPERS Accredited Fiduciary Program (All modules)
October 27 - 31
Las Vegas, NV

Public Safety Conference
October 28 - 31
Las Vegas, NV

The Voice for Public Pensions

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