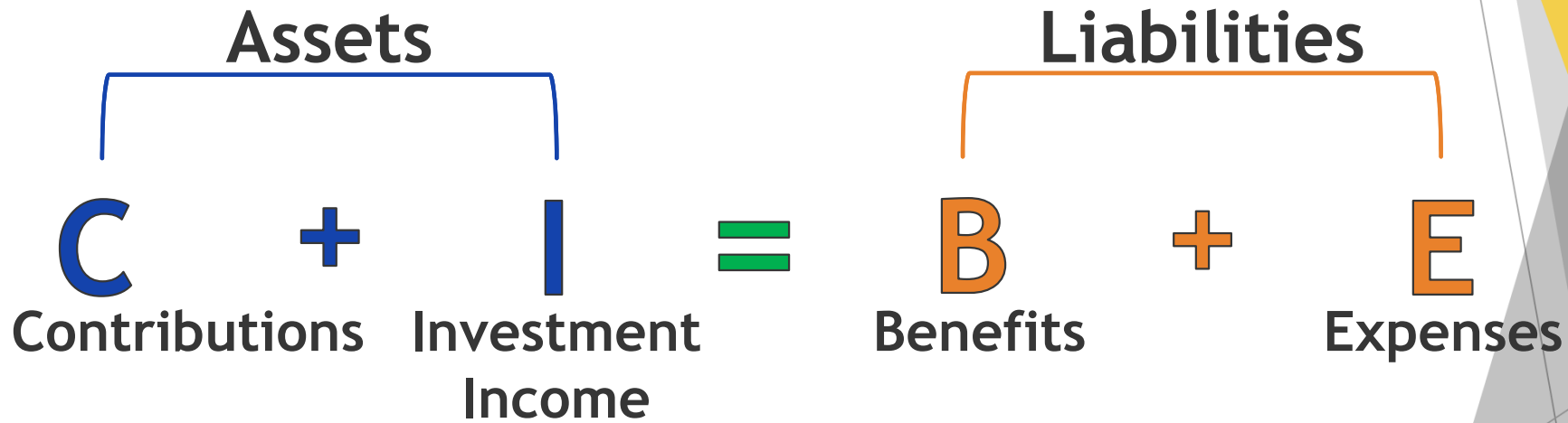


# The Foundation Formula for Oversight



# Missouri Department of Transportation and Highway Patrol Employees' Retirement System



## **Investments**

**Larry Krummen, Chief Investment Officer**

**Jennifer Johnson, Manager**

**Luke Fortson, Analyst**

**Hannah Wells, Analyst**

February 1, 2021

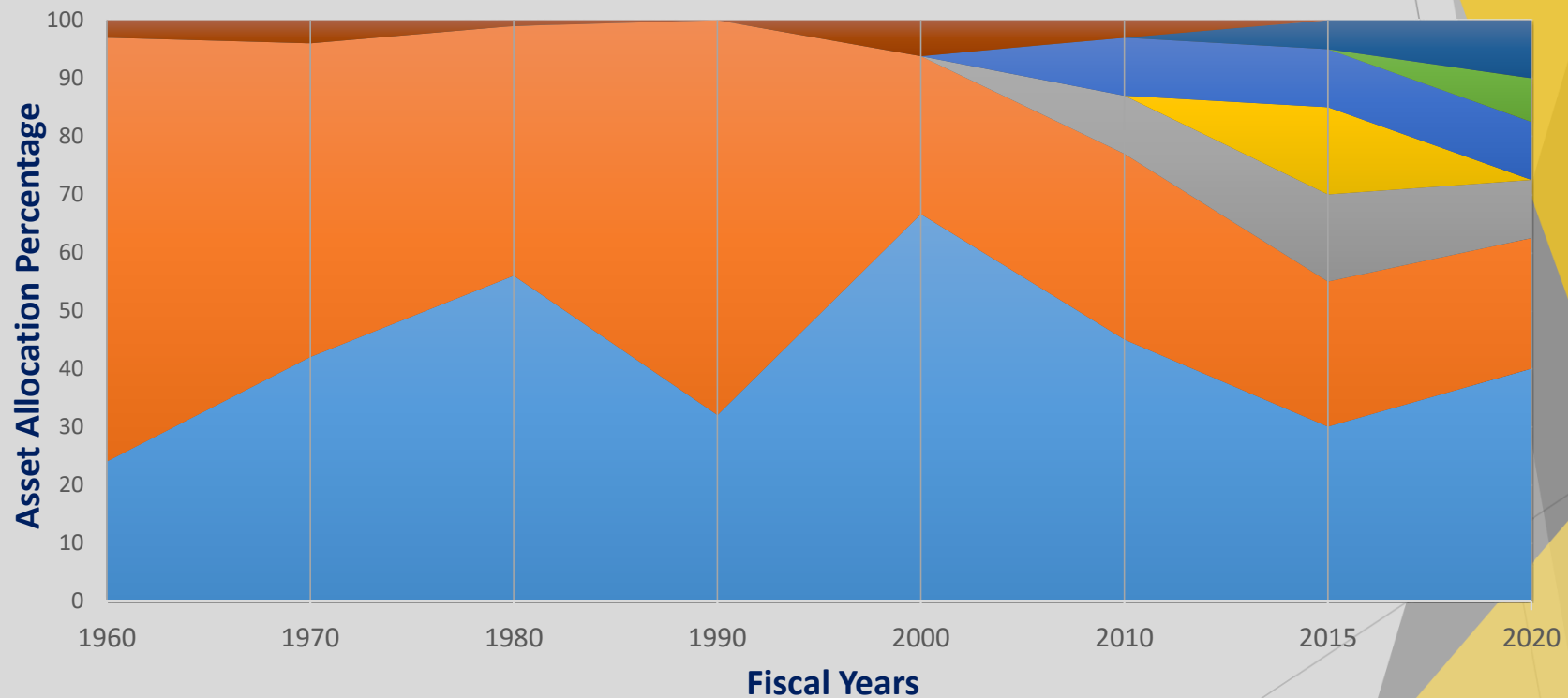
# History of MPERS' Investment Portfolio

- ▶ **Historical Framework (1955 - 2003)**
  - ▶ Conservatively managed by United Missouri Bank from 1955 to 1997
  - ▶ Lack of staffing dedicated exclusively to MPERS
- ▶ **Current Environment (2003 - Present - December 2020)**
  - ▶ MPERS' Board begins to dedicate significant resources (staff, systems, and upgraded consultants) to the investment function
  - ▶ The Board adopts governance policies to delegate the day to day implementation of investment portfolio to staff and consultants
  - ▶ The investment portfolio was completely restructured to incorporate alternative investment strategies that both enhance returns and reduce risk
- ▶ **The Net Result....**

MPERS Relative Ranking Within Public Fund Universe (in Percentiles)		
Timeframe	12/31/2003	12/31/2020
1-year	66 <sup>th</sup>	90 <sup>th</sup>
3-year	85 <sup>th</sup>	68 <sup>th</sup>
5-year	82 <sup>nd</sup>	82 <sup>nd</sup>
10-year	95 <sup>th</sup>	22 <sup>nd</sup>

# The Investment Story

## MPERS Investments Over the Years



- Global Equities
- Fixed Income
- Private Equity
- Hedge Funds
- Real Estate
- Opp Debt
- Real Assets
- Cash



# Keys to MPERS' Success

## Delegation of Authority Provided in Governance Policies

- ▶ Ability to hire and fire investment managers
  - Many of our peers still have to present investment mandates for approval at Board meetings
- ▶ Early adopter of advanced investment techniques
  - Opportunistic debt, real assets, etc..

## Continuity of Senior Investment Staff

- ▶ Over the past 17 years, I've worked with 3 executive directors, 3 general investment consultants, and over 50 different Board members
- ▶ Jennifer Johnson, Manager of Investments, has also been with MPERS since 2007

## Quality Consulting Advice

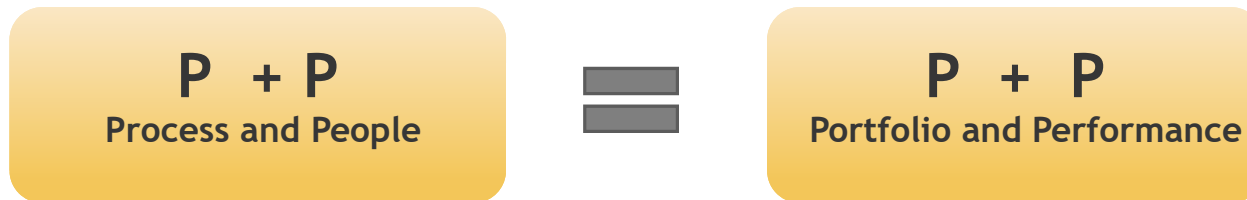
- ▶ MPERS' general and specialty consultants have been successful in keeping the Board informed and educated on our initiatives and have provided solid advice on manager selection



# Roles & Responsibilities

As detailed in MPERS' governance policies

# Key Focus for Board of Trustees



## Key Points:

- ▶ Managing the investment portfolio of a pension systems is a complex process and requires dedicated staff and resources
  - ▶ Pensions utilize complex actuarial and investment models and make multiple assumptions about the growth of assets and liabilities
  - ▶ Investment portfolios have grown more complex in response to lower expected returns from stocks and bonds (especially bonds) and the desire to avoid sharp downturns from the exposure to public equities
- ▶ MPERS' governance policies allow the Board to focus on establishing a **process** and hiring the right **people**, and then monitoring the **portfolio** construction and subsequent investment **performance**

# Board of Trustees

- ▶ Fiduciary responsibility to the plan's beneficiaries
- ▶ General oversight of the portfolio
  - ▶ Review and approval of investment policies and procedures
- ▶ Establishes broad asset allocation policies and return objectives
  - ▶ Based on recommendations and analysis from staff and consultants
- ▶ Delegates implementation to CIO
- ▶ Selects non-investment manager service providers such as the general consultant and custodian bank



# Investment Committee

- ▶ While the Board of Trustees is responsible for the general oversight of the investment portfolio, the investment committee is charged with the responsibility of providing more in-depth analysis on a wide range of investment related issues. The investment committee reviews and/or provides the Board with recommendations on topics such as:
  - ▶ The organization's tolerance for risk
  - ▶ Asset allocation strategies
  - ▶ Total fund performance
  - ▶ Compliance with investment policy

# Executive Director

- ▶ Administers day to day operations of MPERS
- ▶ Provides direct oversight to MPERS' investment portfolio
  - ▶ Agrees in writing to all investment manager hires and terminations
  - ▶ Monitors performance of investment portfolio
  - ▶ Ensures funds are invested in accordance with Board approved investment policies
  - ▶ Ensures internal controls are developed to safeguard assets

# Chief Investment Officer

- ▶ Administers all facets of the investment portfolio
  - ▶ Works with consultants to make investment recommendations to the Board
  - ▶ Evaluate/hire/fire potential investment managers and service providers (with the approval of the Executive Director and the appropriate consultant)
  - ▶ Oversee MPERS' investment staff
  - ▶ Internal management of MPERS' fixed income portfolio
  - ▶ Daily management (positioning / rebalancing) of the investment portfolio
  - ▶ Monitor and evaluate existing external asset managers (due diligence)
- ▶ Serves as MPERS' liaison between the plan and the investment community
- ▶ Continually evaluates and refines the program

# Custodian Bank: The Northern Trust Company

- ▶ The “book of record” for the investment program
- ▶ Hired by the Board of Trustees
- ▶ Accepts possession of securities for safekeeping; collects and disburses principal and income
- ▶ Provides performance reporting and accounting statements

# General Investment Consultant: NEPC

- ▶ Hired by the Board of Trustees as a “check and balance” to system staff
  - ▶ Provides advice on investment policies and asset allocation strategies (in conjunction with CIO)
  - ▶ Educates and provides investment perspective on portfolio goals and structures
  - ▶ Monitors financial, economic, and political influential developments
  - ▶ Agrees in writing to manager hires and terminations (when appropriate)
- ▶ Provides the Board with quarterly investment performance reports
  - ▶ Manager’s performance relative to peer groups
  - ▶ Manager’s adherence to style of management (growth, value, small, big, etc.)
  - ▶ Manager’s adherence to their Investment Management Agreement
  - ▶ RFP scheduled June 30<sup>th</sup> to review the current consultant market
- ▶ RFP scheduled June 30<sup>th</sup> to review the current consultant market

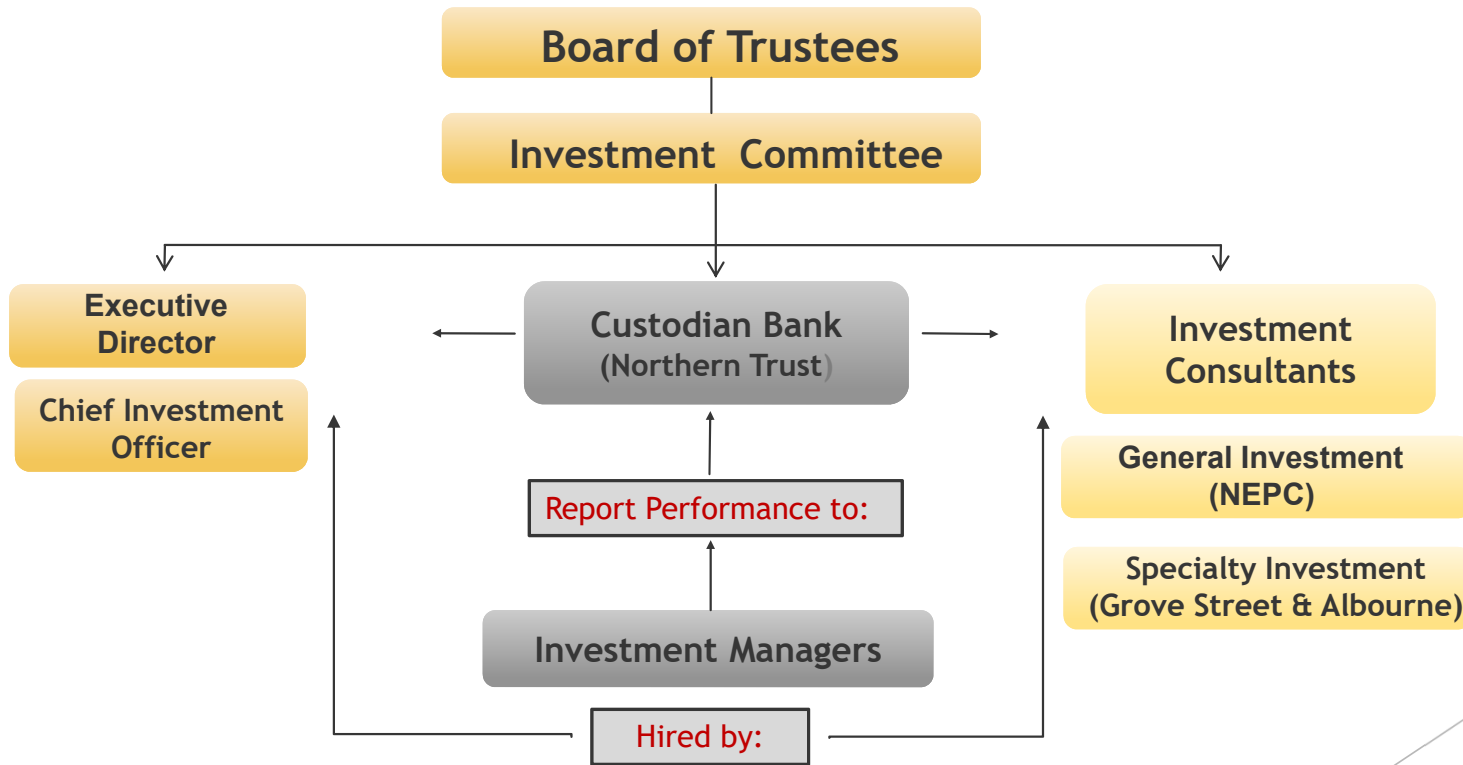
# Specialty Investment Consultants: Albourne/Grove Street Advisors

- ▶ Provide specialized knowledge and expertise
  - ▶ Develop and implement specific investment policies and asset allocation strategies unique to their particular asset class
  - ▶ Assist staff in developing a greater level of expertise and understanding of their respective strategy or asset class
  - ▶ Provide extensive manager due diligence research to MPERS' staff
- ▶ Agrees in writing to investment manager hires and terminations
- ▶ NOTE: MPERS' moved away from Grove Street Relationship in favor of adding internal staff and ultimately cutting overall fee structure

# Investment Managers

- ▶ Manage assets according to provisions of Investment Management Agreement
- ▶ Subject to hiring and firing decisions by staff and consultant(s)
  - ▶ Decisions reported to board within 72 hours
- ▶ Ongoing Due Diligence Requirements (per MPERS' Investment Policy)
  - ▶ Quarterly communications with MPERS including performance results and any significant organizational changes
  - ▶ MINIMUM of one meeting per year with staff (occurs much more frequently in practice). Meetings can be in the form of manager visits (MPERS or manager's office), annual fund meetings, or conference calls

# Overview of Roles and Responsibilities







# Goals, Objectives, Assumptions, & Risk Management

(for MPERS' Investment Portfolio)

# Objectives, Constraints, and Risk Management

$$\begin{array}{ccccccc} \mathbf{C} & + & \mathbf{I} & = & \mathbf{B} & + & \mathbf{E} \\ \text{Contributions} & & \text{Net Investment} & & \text{Benefits} & & \text{Expenses} \\ & & \text{Income} & & & & \end{array}$$

## Key Points:

- ▶ The right side of equation is essentially fixed (benefits are set in statute)
- ▶ If the right side is fixed, for employee contributions to come down, investment income must go up
- ▶ To increase investment income, you must take risk
- ▶ Balancing this relationship and establishing a risk tolerance level is arguably the most critical decision in constructing an investment portfolio
- ▶ Staff's Goal: Minimizing volatility of Investment Income (I) will in turn minimize the volatility of Contributions (C)

# Risk Management

## Defining Risk

- ▶ The stated goal of the investment policy is to invest system assets in a diversified portfolio that achieves the highest possible rate of return consistent with the system's tolerance for risk.
- ▶ The first step is to properly define risk
  - ▶ Is there cash on hand to pay benefits? (liquidity risk)
  - ▶ Will the assets perform as expected? (market risk - or Beta)
  - ▶ Will the liabilities perform as expected? (actuarial risk / demographic risk)
  - ▶ Do we look different? (headline risk)
    - Would you rather fail conventionally or succeed unconventionally?
    - While MPERS' performance has been strong, historically our portfolio has been unique relative to most peers in the public fund space, which has
- ▶ The recent Funston project is providing a fresh look for how MPERS addresses the various definitions of risk.

# Risk Management

## Staff Perspective

- ▶ MPERS' Investment Staff views risk primarily from a quantitative lens
  - ▶ Primary risk is “volatility of returns” as defined by standard deviation
  - ▶ Goal is to meet our assumed rate of return while minimizing volatility in the investment portfolio
  - ▶ Reduces the impact of investment returns on contribution rates and provides a smoother and more consistent contribution rate for budgeting purposes
  - ▶ MPERS' success is tied to our extensive use of private asset classes to both enhance returns and reduce the overall risk profile of the fund
  - ▶ Diversification is the primary risk management tool to minimize volatility within the portfolio (more on that to follow)
- ▶ Once you determine the appropriate risk tolerance, the portfolio construction process and day to day implementation is delegated to staff, with oversight from the consultants, and monitored by the Board of Trustees.

# Performance Measurement

## MPERS' investment benchmarks

1. Meet or exceed the actuarial return assumption
  - ▶ Long term objective
  - ▶ Currently set at 7%
2. Outperform the policy benchmark return
  - ▶ The return that could be achieved by investing passively across MPERS' targeted asset allocation
  - ▶ Incorporates actual performance of investment markets
3. Outperform the median public fund investment return
4. Outperform a passive 60/40 allocation to stocks and bonds
  - ▶ The alternative / low cost option to allocating staff and resources to the investment program
  - ▶ Similar to MPERS' investment program prior to 2003

# Performance Measurement

## How Are We Doing?

- ▶ Performance is calculated by Northern Trust and verified by NEPC and investment staff
- ▶ NEPC reports MPERS' performance to the board
- ▶ MPERS' current asset allocation has served the fund well over the past 10 years
- ▶ As of December 31, 2020, MPERS' 10 year return ranks in the top 22% of the public fund peer universe.
  - ▶ MPERS' 10 year risk profile (as measured by volatility of returns) is in the bottom 1% of the peer universe.
  - ▶ That combination has produced a 10-year Sharpe ratio (a measure of return per unit of risk) in the top 1% of our peers.
- ▶ MPERS' December 31, 2020 Performance Report
- ▶ December 31, 2020 CIO Report

## Current Allocation vs. 60%/40%

FY ending June 30	Market Value (B)	Total Plan Return (C)	60%/40% Return* (D)	= B x C	= B x D	MPERS Excess Return
FY03	\$1,237,513,224.00					
FY04	\$1,349,531,516.00	14.93%	14.74%	\$184,760,724.34	\$182,462,369.71	\$2,298,354.63
FY05	\$1,435,962,316.00	10.98%	9.42%	\$148,178,560.46	\$127,137,593.51	\$21,040,966.95
FY06	\$1,593,889,243.00	14.95%	10.50%	\$214,676,366.24	\$150,724,541.02	\$63,951,825.23
FY07	\$1,821,213,548.00	18.09%	17.59%	\$288,334,564.06	\$280,344,416.91	\$7,990,147.15
FY08	\$1,713,975,398.00	-2.41%	-2.71%	(\$43,891,246.51)	(\$49,366,925.71)	\$5,475,679.20
FY09	\$1,221,219,306.00	-24.70%	-15.18%	(\$423,351,923.31)	(\$260,103,723.68)	(\$163,248,199.62)
FY10	\$1,303,536,373.00	12.92%	10.86%	\$157,781,534.34	\$132,579,951.12	\$25,201,583.21
FY11	\$1,544,387,723.00	21.75%	19.64%	\$283,519,161.13	\$256,075,269.55	\$27,443,891.57
FY12	\$1,528,065,232.00	2.74%	-0.90%	\$42,316,223.61	(\$13,946,622.08)	\$56,262,845.69
FY13	\$1,674,921,460.00	13.42%	9.66%	\$205,066,354.13	\$147,685,431.48	\$57,380,922.65
FY14	\$1,917,976,458.00	17.59%	15.52%	\$294,618,684.81	\$259,981,920.35	\$34,636,764.46
FY15	\$2,003,769,229.00	6.62%	1.17%	\$126,970,041.52	\$22,427,971.81	\$104,542,069.71
FY16	\$1,984,989,056.00	1.01%	0.16%	\$20,238,069.21	\$3,293,554.74	\$16,944,514.48
FY17	\$2,163,726,897.00	11.22%	11.14%	\$222,715,772.08	\$221,207,559.97	\$1,508,212.11
FY18	\$2,312,972,908.00	9.42%	6.28%	\$203,823,073.70	\$135,832,251.02	\$67,990,822.68
FY19	\$2,423,025,673.00	6.84%	5.78%	\$158,207,346.91	\$133,782,353.00	\$24,424,993.91
FY20	\$2,361,830,385.00	-0.46%	4.76%	(\$11,145,918.10)	\$115,336,022.03	(\$126,481,940.13)
Excess Return Over 16 Years						\$227,363,453.87
16 year Annualized		7.353%	6.584%			

\* 60% MSCI ACWI / 40% Barclays Aggregate

# How Unique is MPERS' Asset Allocation?

## Overall State Pension Asset Allocations

- ▶ MPERS was an early adopter of private market alternatives, but other state plans are moving toward our asset allocation
- ▶ Alternatives (private markets) are growing in importance
  - Reaction to declining interest rates and equity market volatility
- ▶ Given current equity market valuations and the low interest rate environment, it is highly likely this trend will continue as pension plans struggle to meet actuarial targets.

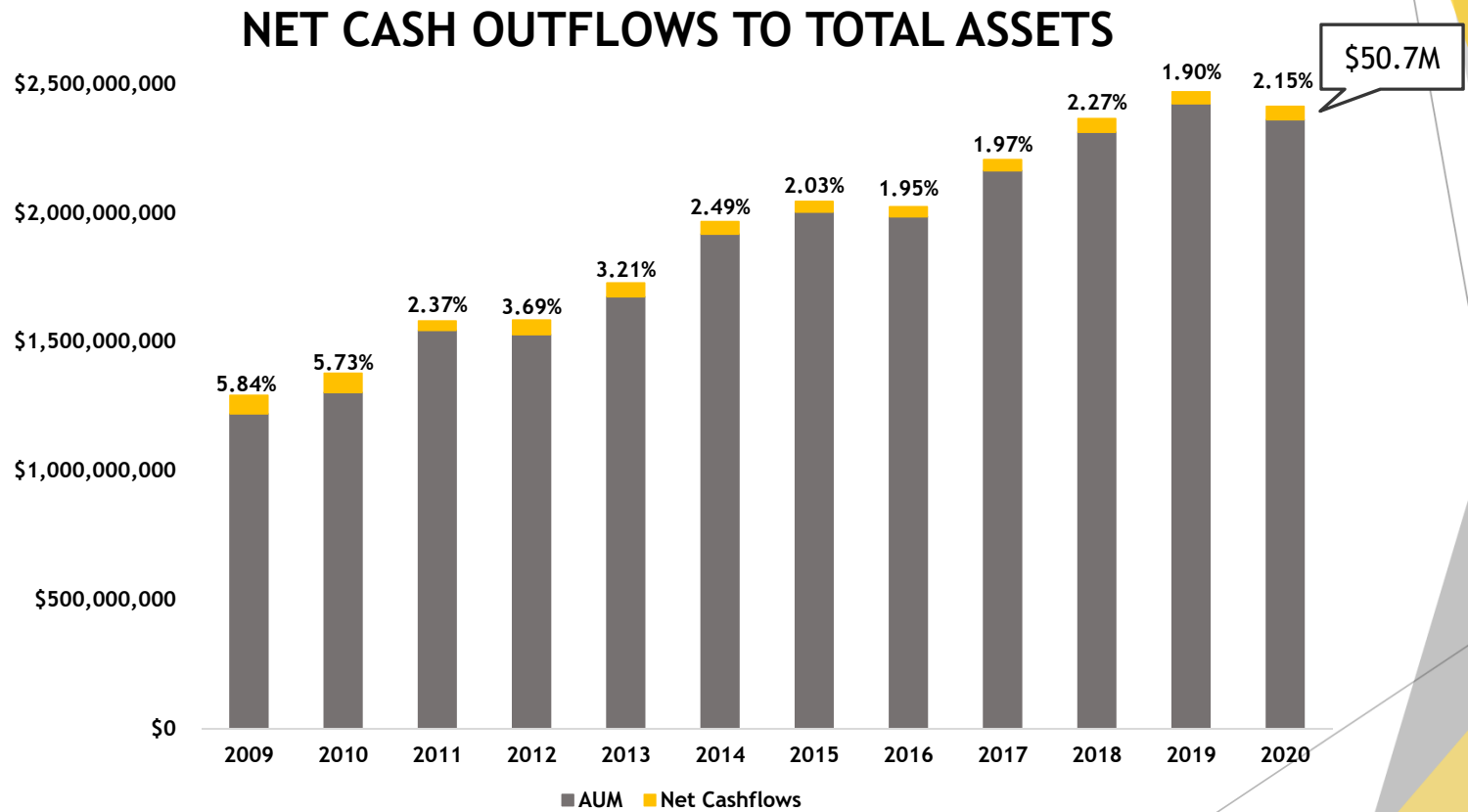
	2006	2011	2012	2013	2014	2015	2016	2017	2018	Change from 2006 to 2018
Public Equities	61%	51%	49%	50%	51%	50%	48%	47%	47%	-14%
Fixed Income	26%	25%	25%	22%	23%	23%	24%	23%	22%	-4%
Alternatives	10%	21%	24%	25%	24%	24%	26%	26%	30%	20%
Cash	2%	3%	2%	3%	2%	3%	2%	3%	1%	-1%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	

As of fiscal year-end June 30

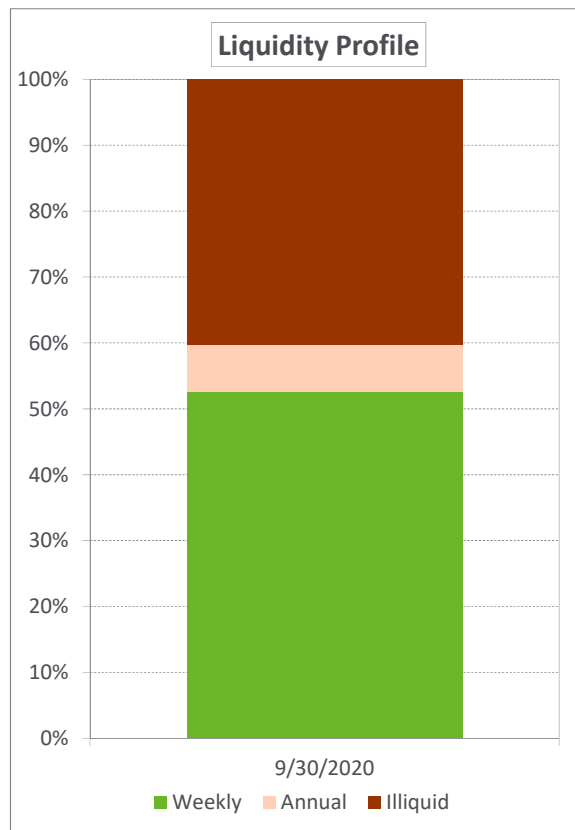
Cliffwater Research – An Examination of State Pension Performance 2000-2018



# MPERS' Liquidity: Another Management Factor



# EXISTING LIQUIDITY PROFILE

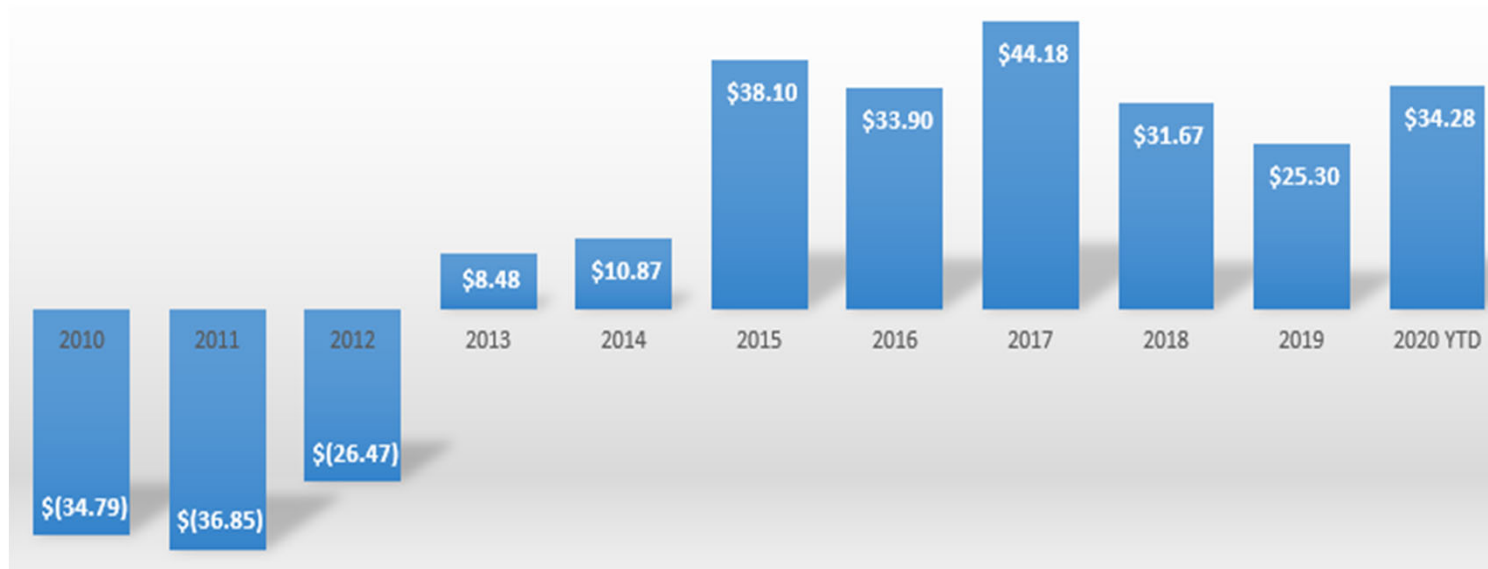


- **52.6% of total assets are available on at least a monthly basis to meet regular liquidity needs (\$1.3 Billion)**
  - Benefit payments and expenses
  - Rebalancing
  - Capital calls
- **Additional 7.1% of assets available on at least an annual basis (\$175 Million)**
  - Can be part of planned rebalancing but much less reliable for regular liquidity needs
- **Remaining 40.3% of assets are relatively illiquid (\$997 Million)**
  - Intermittent distributions - hard to plan around
  - Could be sold in secondary markets, but likely at steep discount

# Private Equity Pacing Model



# Private Equity Net Cash Flows



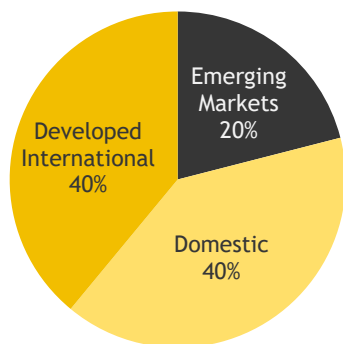


# Portfolio Construction

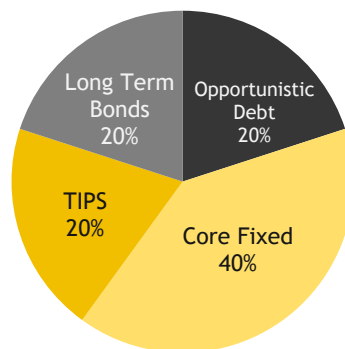
(for MPERS' Investment Portfolio)

# The Role of Each Asset Class Within a Diversified Investment Portfolio

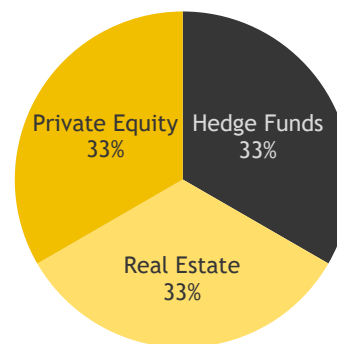
Global Equity



Fixed Income



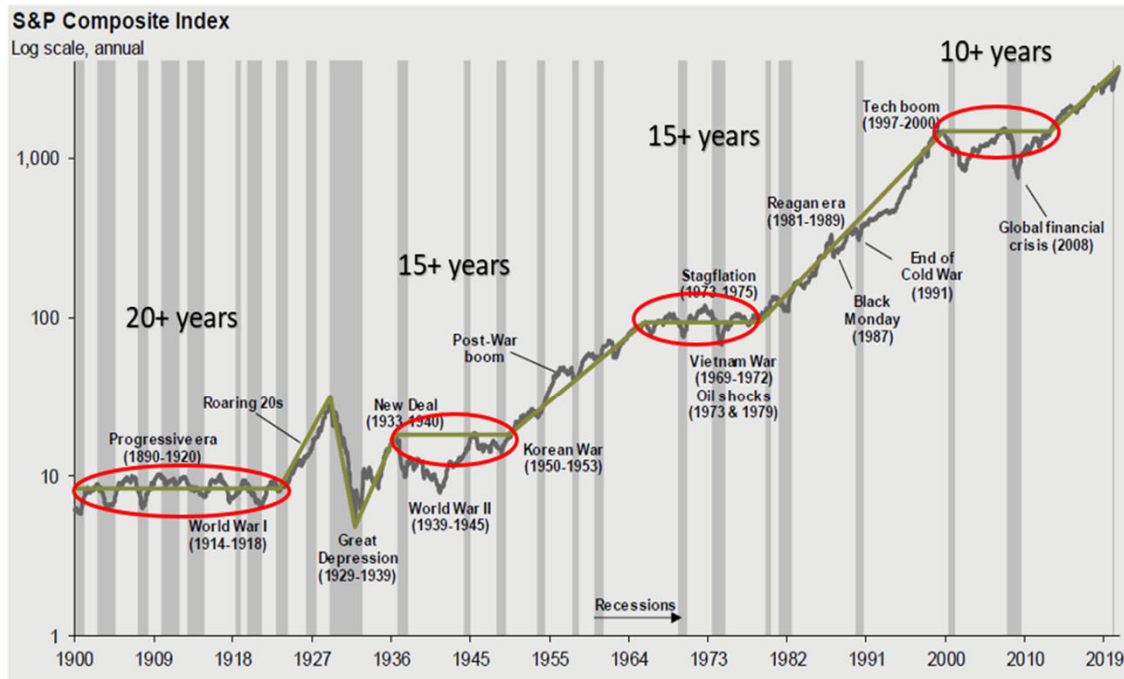
Private Investments



## Key Points:

- ▶ Historically, equities have produced the best long-term returns but also carry the highest risk
- ▶ Government Bonds offer the best diversification to equities but offer little in terms of expected return.
- ▶ Private markets are used primarily to enhance returns but can also serve as risk reducers
- ▶ How much you allocate to each category depends on your risk & return objectives
- ▶ **QUESTION:** If equities offer the best long-term returns, and MPERS is a long term investor, why not put 100% of the fund in equities?

# Answer: Too Much Short-term Risk



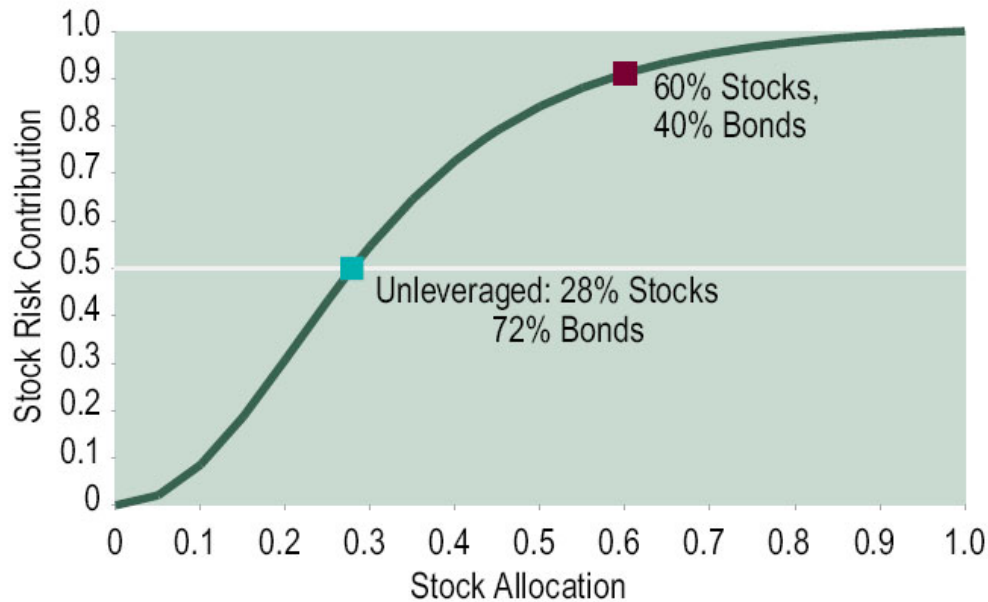
Source: FactSet, NBER, Robert Shiller, J.P. Morgan Asset Management.  
Data shown in log scale to best illustrate long-term index patterns. Past performance is not indicative of future returns. Chart is for illustrative purposes only.  
Guide to the Markets – U.S. Data are as of December 31, 2020.

- ▶ There have been several 10-15 year periods where equity returns have been negative or flat
- ▶ The need to preserve capital leads to the use of multiple asset classes to reduce risk (a.k.a., “don’t put all your eggs in one basket”)

# Challenge: Balancing Equity Risk in the Investment Portfolio

FIGURE 2: RISK BUDGETING

Stock/Bond Allocations Without Leverage



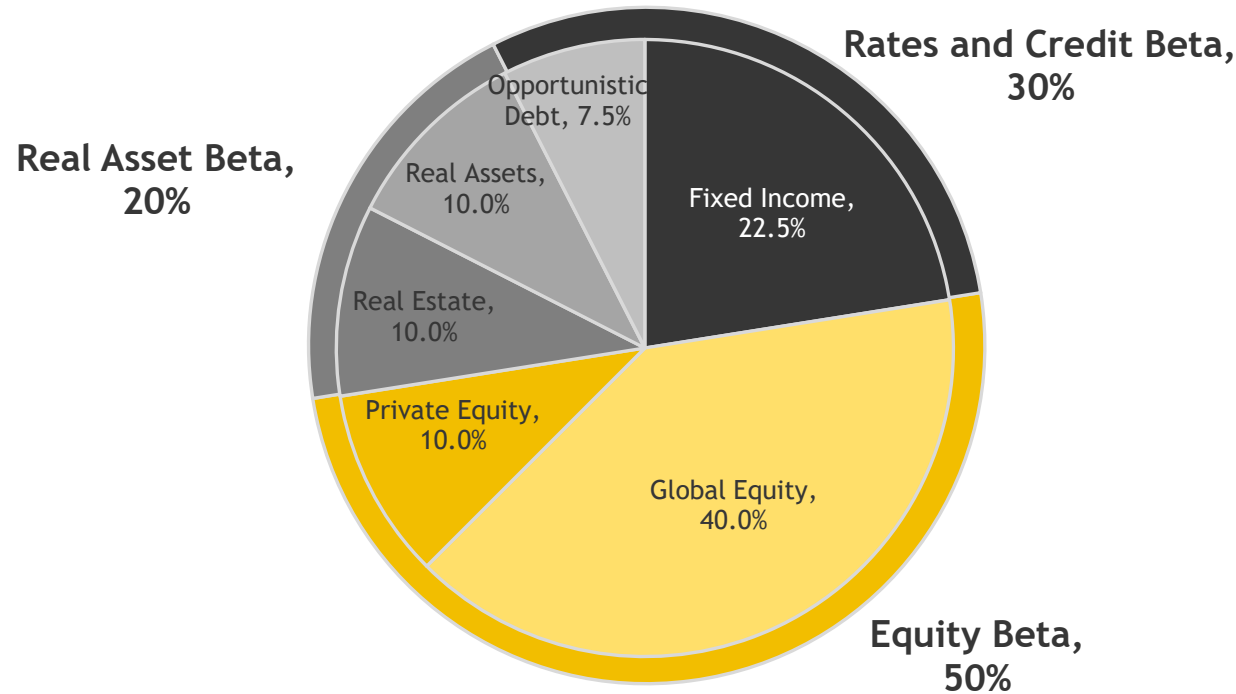
Source: First Quadrant, L.P.

## Problem: Equity Risk Dominates the Typical Investment Portfolio

- ▶ Equities have roughly three times the risk of traditional fixed income securities
- ▶ In the typical 60/40 stock/bond portfolio, over 90% of the overall risk comes from the equity allocation
- ▶ To equally balance the risk of stocks and bonds, you have to invest 28% in stocks and 72% in bonds.
- ▶ This portfolio only generates a 2.7% expected return.



# MPERS' Target Asset Allocation



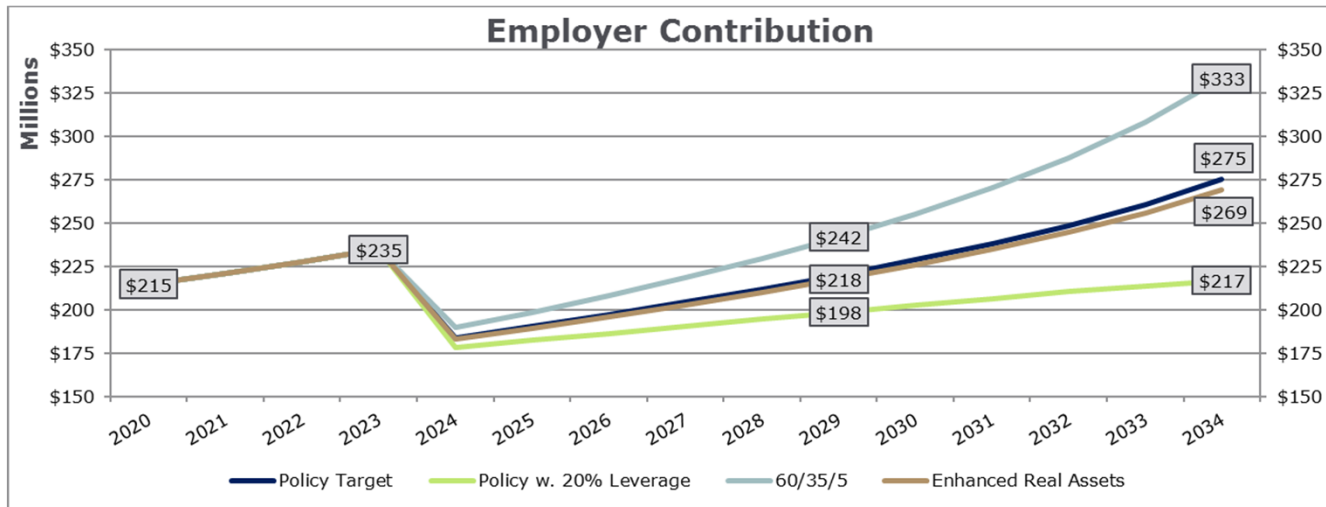
The target asset allocation is set by the Board of Trustees as a result of the most recent Asset / Liability Study in 2020 and recommendations from investment staff and general consultant. An A/L study occurs approximately every 5 years, and the Board is in the process of reviewing the most recent study that was presented in February, 2020.

# MPERS' Asset Allocation Review:

Asset Class	60 / 40	Current Policy Mix	20% Leverage
Global Equity	60%	40%*	48%*
Private Equity		10%	12%
<b>Total Equity</b>	<b>60%</b>	<b>50%</b>	<b>60%</b>
TIPS		5.0%	6.0%
Core Bonds	40%	10.0%	12%
Long Govt/Credit		7.5%	9.0%
Private Debt		7.5%	9.0%
<b>Total Fixed Income</b>	<b>40%</b>	<b>30%</b>	<b>36%</b>
Real Assets		10%	12%
Real Estate		10%	12%
<b>Total Real Assets</b>		<b>20%</b>	<b>24%</b>
US Leverage Cost		0%	-20%
Cash		0%	-20%

Measure	60/40	Current Policy Mix	20% Leverage
Expected Return 10 Yr (Geometric)	4.5%	5.8%	6.6%
Expected Return 30 Yr (Geometric)	5.5%	6.8%	7.6%
Standard Deviation (Asset)	10.6%	12.1%	14.5%
Sharpe Ratio (10 Years)	0.35	0.41	0.40

# BASELINE CONTRIBUTION: 15 YEAR COMPARISON



<sup>1</sup> Assumes NEPC's 10-year return assumption for each allocation per annum

Allocation	15-year Nominal Contributions
Policy Target	\$3,354 million
Policy w. 20% Leverage	\$3,077 million
60/35/5	\$3,638 million
Enhanced Real Assets	\$3,326 million

\*Present value determined using 7% interest rate and assuming BOY contributions



# Background Information on Leverage Facility

- ▶ Over the past two plus years, MPERS' staff has been researching the concept of how a fund-wide leverage facility could enhance MPERS' investment portfolio.
- ▶ Broadly speaking, Leverage implies the use of “borrowed money” to fund asset purchases, with the funds invested alongside the current portfolio.
- ▶ The use of leverage will increase investment returns as long as the incremental funds are invested at rates that exceed the borrowing rate.
  - ▶ It's important to note that leverage also increases the potential losses for the fund, and will increase the overall volatility of the investment portfolio.
- ▶ Enhances MPERS' liquidity profile
  - ▶ Provides valuable, long-term liquidity pool for rebalancing / working capital in times of stress in financial markets (in lieu of selling assets to raise cash)
- ▶ Improves prospective investment performance
  - ▶ Leverage facility is conservatively projected to generate between 50-100 basis points (0.5% - 1%) of incremental return (\$12-24 million annually)

## Equity Beta

50% of Assets

### Public Equity

vs

### Private Equity

- ▶ Listed stocks on public exchanges (IBM, Apple)
- ▶ Exchange traded / market pricing
- ▶ Daily liquidity
- ▶ Lower fees
- ▶ Significant decline in number of publically listed companies
- ▶ Limited ability to improve company and/or profitability (limited to buy, sell, or hold decisions)
- ▶ Role: core risk component of nearly every investment portfolio
- ▶ MPERS target allocation: 40% of assets

- ▶ Private companies, privately held (Brinkmann Constructors)
- ▶ Valuation process (audited)
- ▶ Illiquid (sale process / realizations)
- ▶ Higher fees
- ▶ Significant growth in number of private companies
- ▶ Many tools available to improve company and/or profitability
- ▶ Role: add return or diversification by taking advantage of long-term view and investment team resources
- ▶ MPERS target allocation: 10% of assets

## Rates and Credit Beta

30% of Assets

### Public Fixed Income/Credit

vs

### Opportunistic Debt

- ▶ US Treasuries or corporate debt
  - ▶ Exchange traded / market pricing
  - ▶ Daily liquidity
  - ▶ Lower fees / No fees (internal management)
  - ▶ Lower volatility (AA ratings or better)
  - ▶ Low absolute return with current interest rate environment
  - ▶ Role: Diversification due to low correlation to equity and growth assets. Anchor to windward in the portfolio.
  - ▶ MPERS target allocation: 22.5% of assets
- ▶ Private debt or distressed credit
  - ▶ Varying valuation processes (audited)
  - ▶ Generally illiquid structures, but not always.
  - ▶ Higher fee
  - ▶ Higher volatility (lower rated credits)
  - ▶ Yield premium over publically traded debt
  - ▶ Role: Take advantage of illiquidity and complexity premiums available across various sectors and cycles.
  - ▶ MPERS target allocation: 7.5% of assets

## Real Assets Beta

20% of Assets

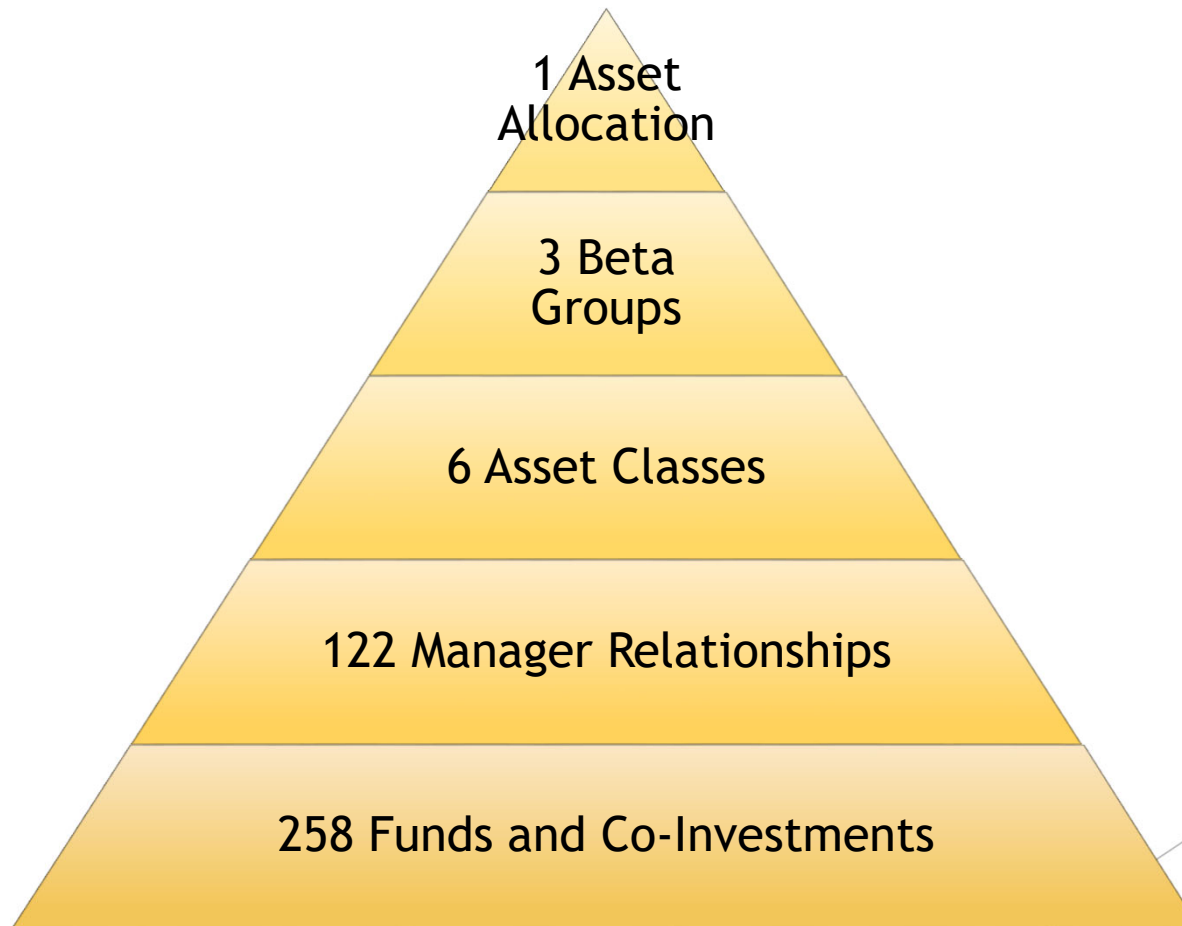
### Public Real Assets

vs

### Private Real Assets

- ▶ REITS, natural resource equities, publicly traded infrastructure, commodities
  - ▶ Exchange traded / market pricing
  - ▶ Daily liquidity
  - ▶ Lower fees
  - ▶ Commodities exhibit long-periods of low returns and high volatility
  - ▶ Diversification benefits / low correlation to equities.
  - ▶ REITs have been strong performers since the financial crisis but have a high correlation to equities.
- ▶ Private equity strategies in natural resources, timber, and infrastructure
  - ▶ Private market valuation process (audited)
  - ▶ Illiquid
  - ▶ Higher fees
  - ▶ Operating businesses have proven to be better performers than the commodities themselves.
  - ▶ Private strategies in these spaces have consistently outperformed public markets.
  - ▶ Private real estate has a lower correlation to public equities than REITs.
- ▶ Role: Inflation participation, diversification benefits and current income
    - ▶ 20% target includes both public and private

# Putting it All Together: Portfolio Building Blocks





# Key Takeaways of Portfolio Construction

- ▶ MPERS' current investment approach is working.
  - ▶ As of December 31, 2020, MPERS' 10 year return ranks in the top 22% of the peer universe.
  - ▶ MPERS has outperformed the actuarial rate of return (7%) over the long-term, as well as the policy benchmark return.
- ▶ MPERS ability to be nimble and dynamic is dependent on the system's governance structure.
- ▶ Staff's Goal: Achieving the highest rate of return possible within the risk parameters set by the Board
  - ▶ Minimizing volatility of investment income will in turn minimize the volatility of employer/taxpayer contributions

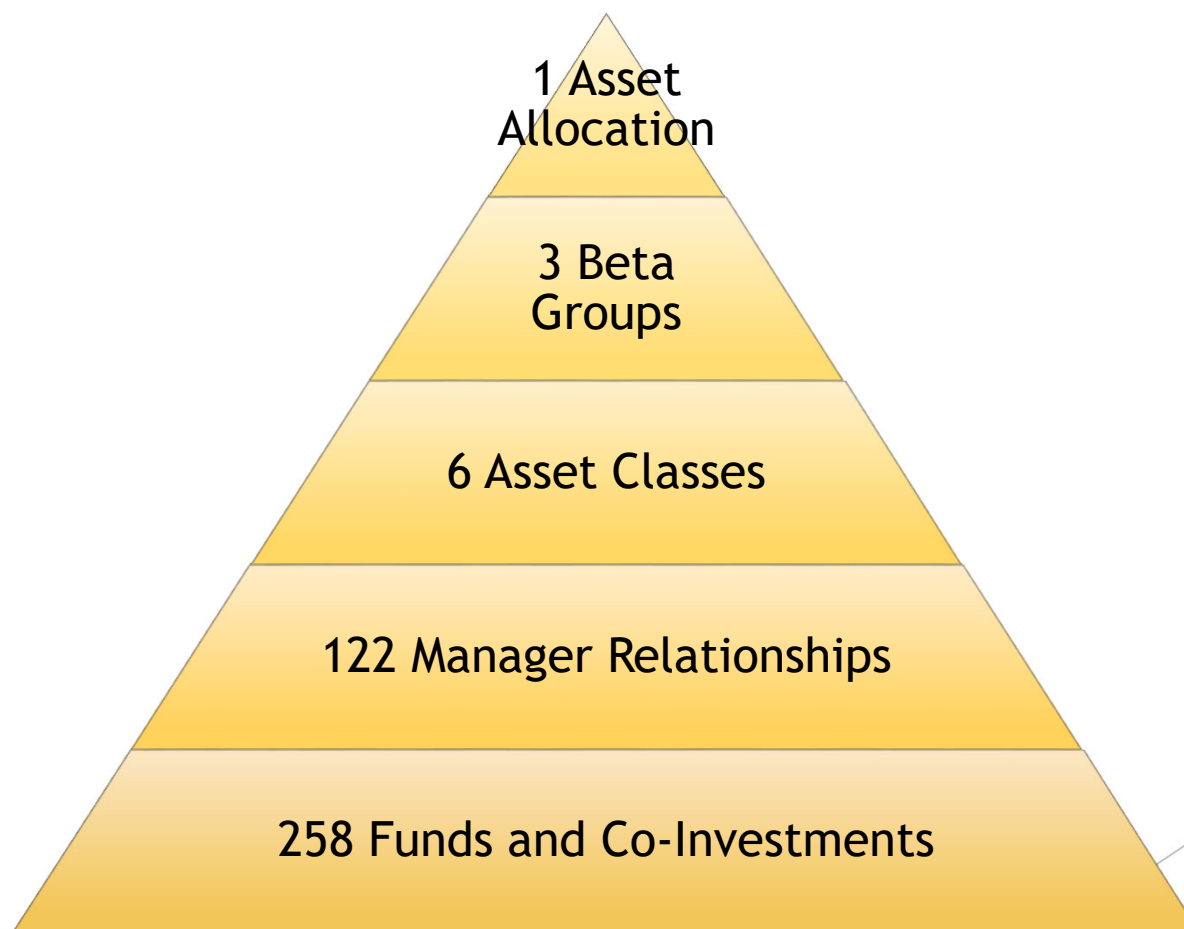


# Portfolio Implementation

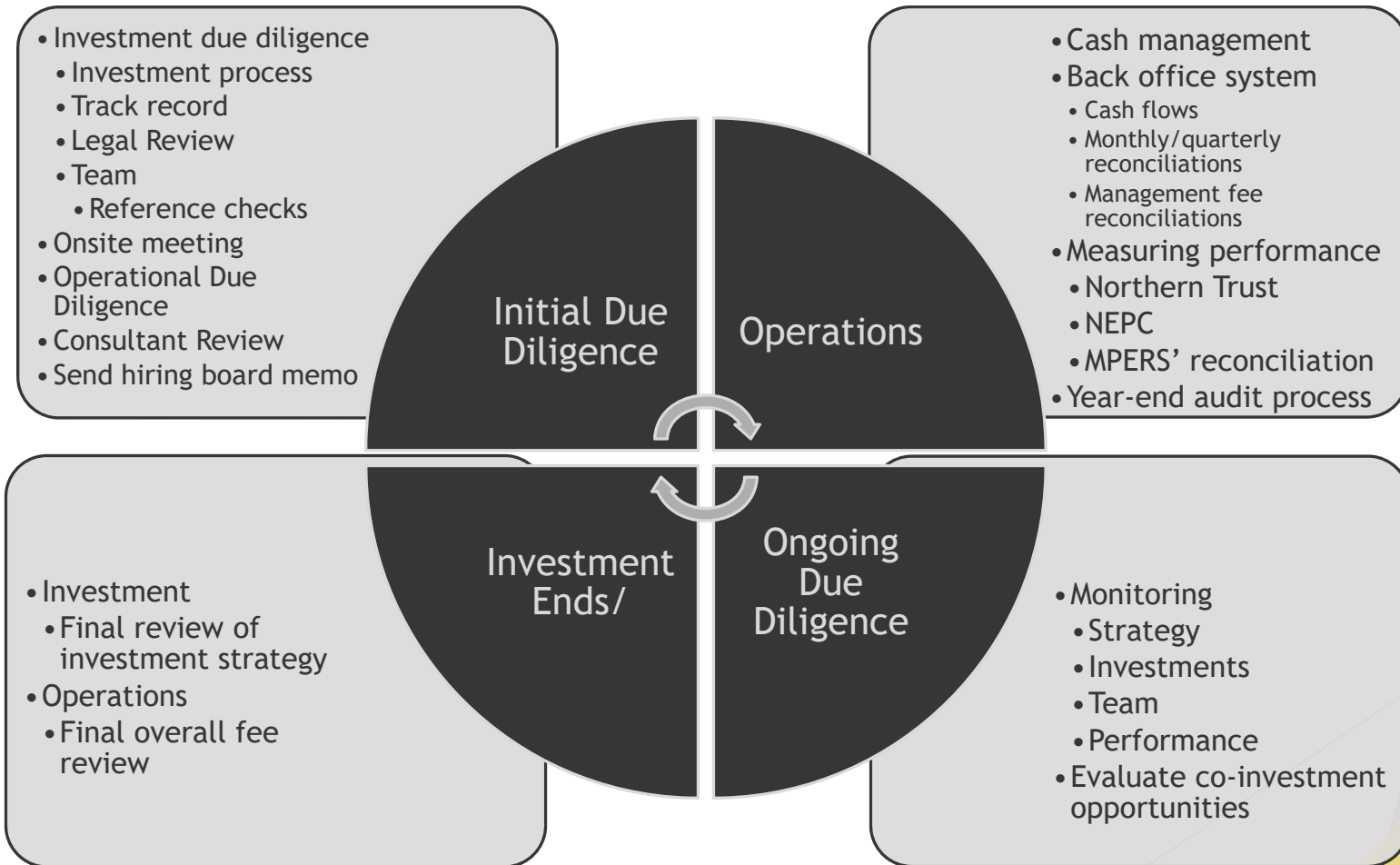
(for MPERS' Investment Portfolio)



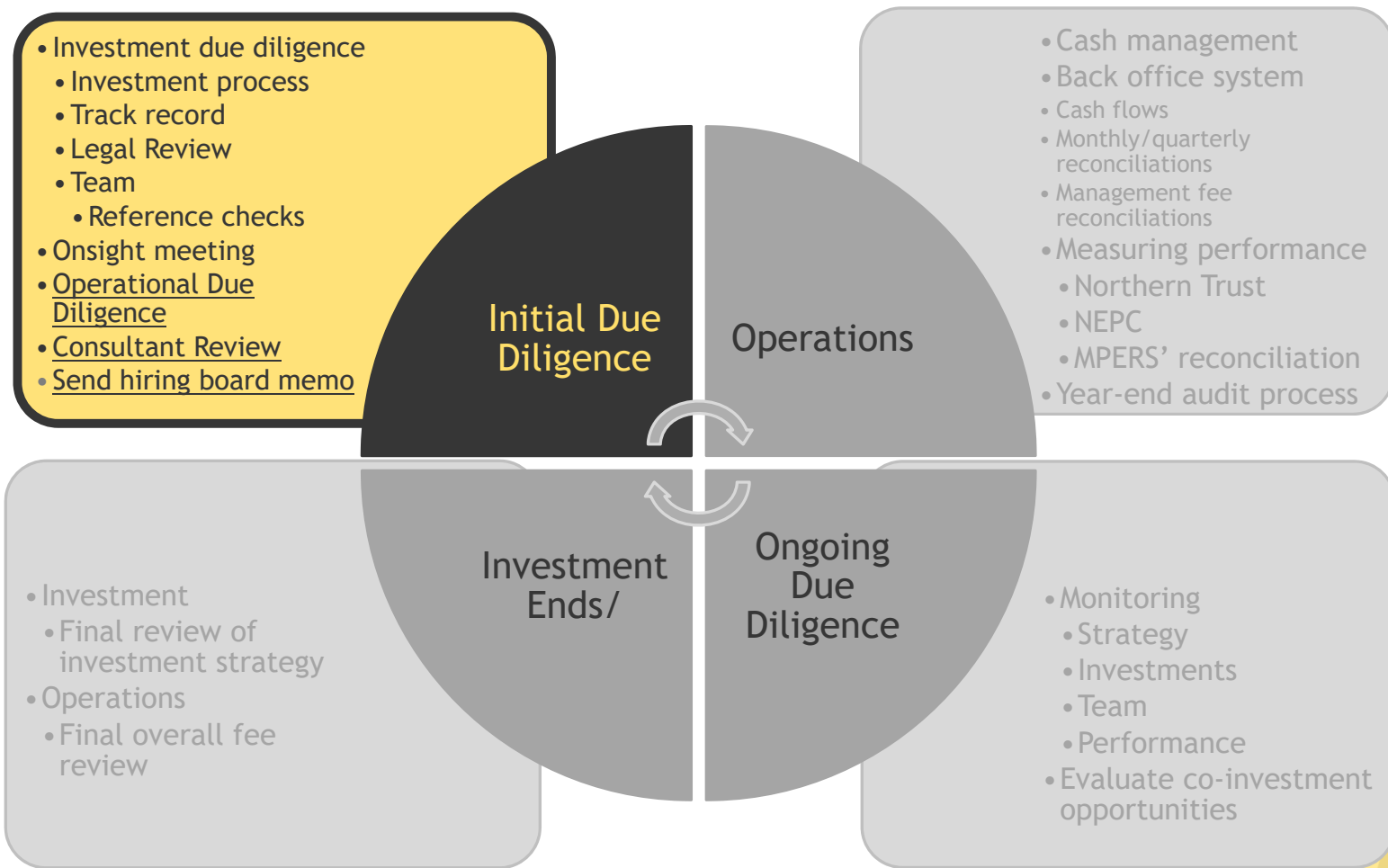
# Portfolio Building Blocks



# Manager/Fund Due Diligence and Monitoring



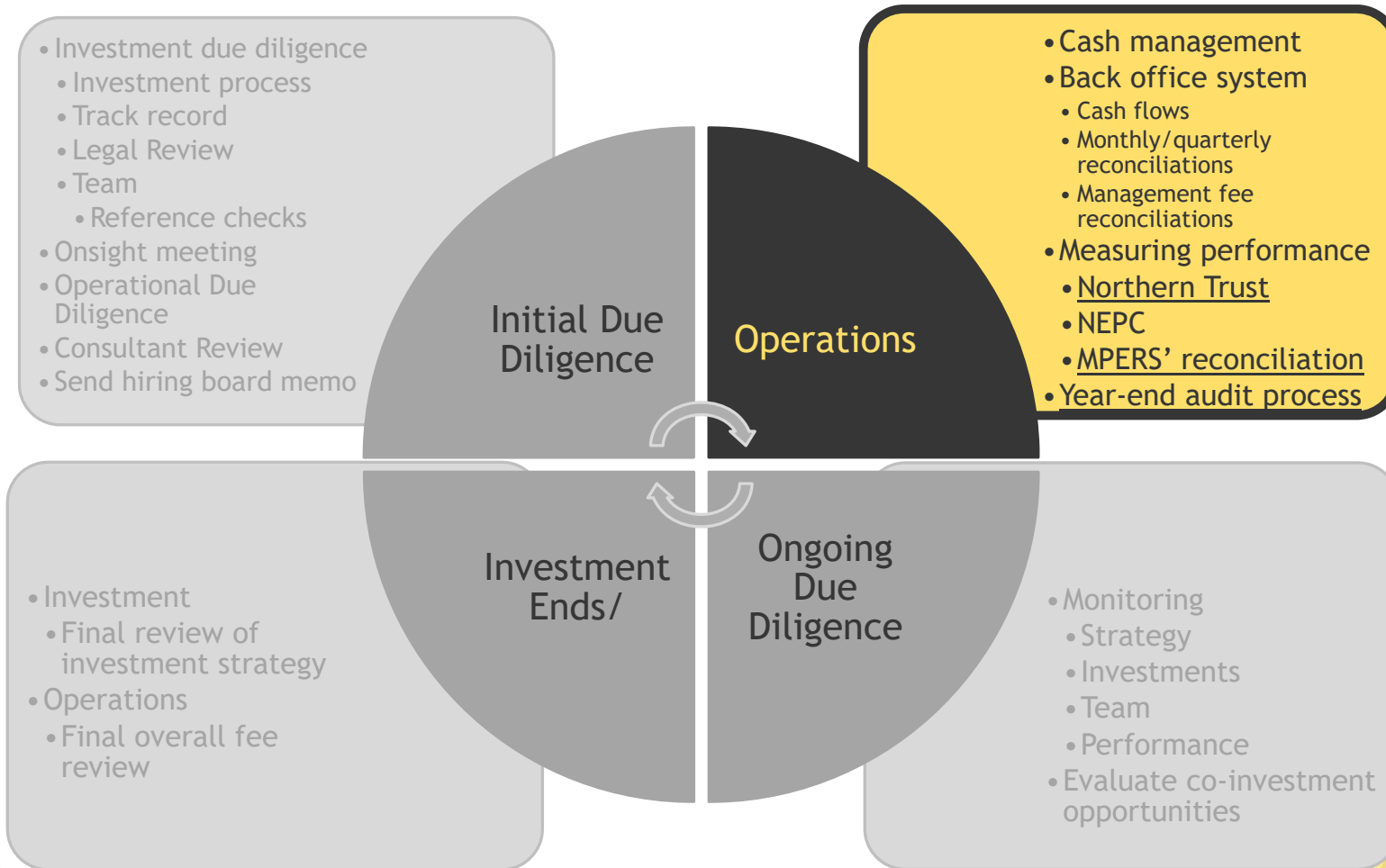
# Initial Manager Due Diligence Process



# Reconciliation of Valuation

- ▶ MPERS' staff fully reviews each manager's valuation process during the initial due diligence process
- ▶ Private market valuations typically include inputs from independent third-party valuation firms (example: Duff and Phelps)
  - ▶ Often third party valuation firms value the assets
- ▶ Independent auditors review the manager's valuation process to ensure the fund is in compliance with the fund's valuation procedures and whether the process is reasonable
  - ▶ After validating the manager's valuation process, all the large auditing firms have valuation teams that review the underlying assets, models, and inputs for reasonableness and consistency (this can take several months)
- ▶ Each investment manager produces quarterly capital account statements that provide details of MPERS' investments in each fund and provides those to MPERS, Northern Trust, and the consultants
- ▶ MPERS' independent auditor (Williams Keepers) also requests audit confirmation from every investment managers to verify that MPERS and Northern Trust are valuing the assets properly

# Investment Operations



# Investment Fees

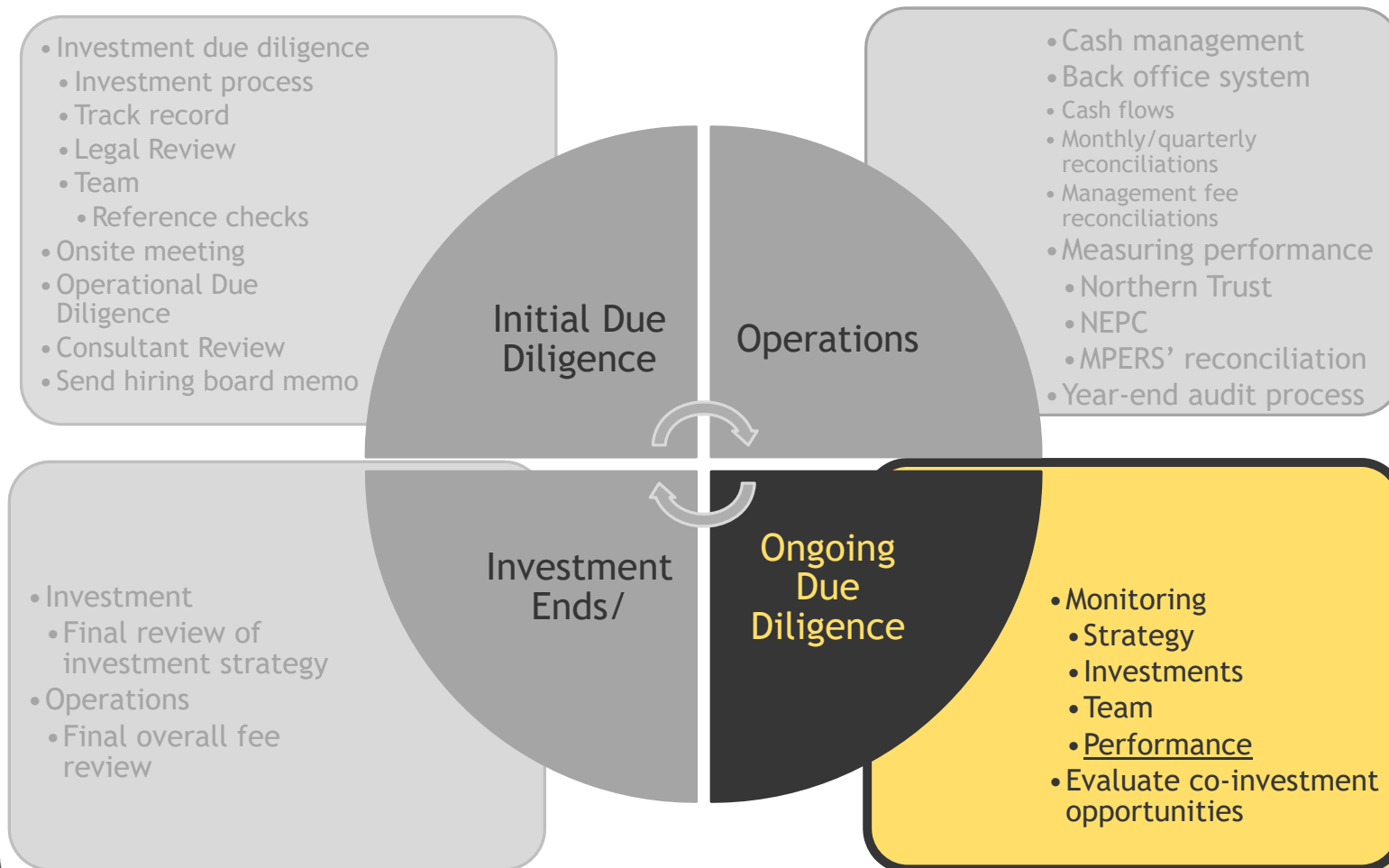
- ▶ FY 2020 total investment fees - .92% not including underlying fund of fund management and performance fees
  - ▶ Management fees
    - A management fee forecast will be included alongside MPERS operating budget in June
    - \$21 million in FY 2019, \$20.8 million for FY 2020
  - ▶ Performance fees (aka carried interest, carry, incentive fees) - are difficult to forecast because they are based on the future performance of the underlying investments
    - \$9 million in FY 2019, (\$4.4 million) for FY2020
  - ▶ Expenses, primarily the costs associated with the fund (audits, legal fees, and other administrative costs)
    - \$4 million in FY 2019, \$3.7 million for FY2020
  - ▶ Portfolio company expenses, costs that often offset management fees, that are paid by underlying portfolio companies
    - \$200 thousand in FY 2019, \$310.8 thousand for FY2020



# Investment Fees

- ▶ MPERS takes a proactive approach to managing our fees
  - ▶ Internal management of traditional asset classes
  - ▶ Negotiation of terms
  - ▶ Alignment of interest (incentive fees)
  - ▶ Emphasis on co-investments
- ▶ Fees are not the primary driver of manager selection
- ▶ The key goal is to align the interests of the manager with MPERS so that we only pay fees when the investment is profitable
- ▶ Investment staff reports fees and expenses in the Comprehensive Annual Financial Report and presents an additional management fee report to the Board on an annual basis.
- ▶ **MPERS' performance is always reported on a "net of all fees" basis, and the results confirm our approach has generated value for our members.**

# Ongoing Manager Due Diligence



# Investment Ends - Cycle Begins Again

