#### Pennsylvania Public School Employees' Retirement System

#### Roster of Investment Managers, Advisors, and Consultants

#### As of December 31, 2016

## List of PSERS' Internally Managed Investment Portfolios

- Bloomberg Commodity Index Overlay
- Gold Fund
- Infrastructure Index
- LIBOR-Plus Short-Term Investment Pool
- MSCI All Country World Index ex. US
- Premium Assistance
- Private Debt Internal Program
- Private Equity Internal Program
- Private Markets and Real Estate Pennsylvania In-House Co-Investment Program
- Public Markets In-House Co-Investments Program
- Real Estate Internal Program
- REIT Index
- Risk Parity
- S&P 400 Index
- S&P 500 Index
- S&P 600 Index
- S&P MLP Index
- Short-Term Investment Pool
- Treasury Inflation Protection Securities
- U.S. Core Plus Fixed Income
- U.S. Long Term Treasuries

#### List of PSERS' External Investment Managers, Advisors, and Consultants

# **Absolute Return Managers**

- Aeolus Capital Management Ltd.
- Apollo Aviation Holdings Limited
- BlackRock Financial Management, Inc.
- Bridgewater Associates, LP
- Brigade Capital Management
- · Capula Investment Management, LLP
- Caspian Capital, LP
- Ellis Lake Capital, LLC
- Garda Capital Partners, LP
- Independence Reinsurance Partners GP, LLC
- Nephila Capital, Ltd.
- Oceanwood Capital Management, Ltd.
- · One William Street Capital Management, LP
- Pacific Investment Management Company
- Perry Capital, LLC
- Venor Capital Management, LP

#### **Publicly-Traded Real Estate Securities Advisors**

· Security Capital Research & Management, Inc.

### Non-U.S. Equity Managers

- Acadian Asset Management, LLC
- Baillie Gifford Overseas Ltd.
- · BlackRock Financial Management, Inc.
- Fidelity Institutional Asset Management LLC
- Marathon Asset Management Limited
- Oberweis Asset Management, Inc.
- · QS Batterymarch Financial Management, Inc.
- Wasatch Advisors, Inc.

#### **Commodity Managers**

- Gresham Investment Management, LLC
- Pacific Investment Management Company
- Wellington Management Company, LLP

### **Global Fixed Income Managers**

#### U.S. Core Plus Fixed Income Managers

- BlackRock Financial Management, Inc.
- Pugh Capital Management, Inc.
- SEI Investment Management Corporation

#### **High Yield Fixed Income Managers**

- · Apollo Global Management, LLC
- Avenue Capital Group
- · Bain Capital Credit, LP
- · Brigade Capital Management
- · The Carlyle Group
- · Cerberus Business Finance, LLC
- Hayfin Capital Management LLP
- · Intermediate Capital Group PLC
- · LBC Credit Management, L.P.
- Mariner Investment Group, LLC
- · Oaktree Capital Management, LP
- · Park Square Capital, LLC
- Summit Partners
- TPG Special Situations Partners
- · Värde Partners, Inc.

# Non-U.S Developed Markets Fixed Income Managers

AllianceBernstein, LP

## **Emerging Markets Debt Managers**

Franklin Templeton Investments

#### **Multi-Sector Fixed Income Manager**

• Pacific Investment Management Company

### **Global Inflation-Linked Securities Manager**

Bridgewater Associates, LP

## U.S. Treasury Inflation-Protected Securities Manager

· Garda Capital Partners, LP

#### **LIBOR-Plus Short-Term Investment Pool Managers**

- · Capula Investment Management, LLP
- Radcliffe Capital Management

# **Master Limited Partnership Managers**

- Atlantic Trust Private Wealth Management
- Harvest Fund Advisors, LLC
- Salient Capital Advisors LLC

#### **Currency Hedging Manager**

· Pareto Investment Management, Ltd.

#### **Risk Parity Managers**

- BlackRock Financial Management, Inc.
- Bridgewater Associates, LP
- D.E. Shaw Investment Management, LLC

### **Real Estate Advisors**

- Charter Oak Advisors, Inc.
- GF Management, Inc.
- L&B Realty Advisors

#### **Real Estate Fund Managers**

- Almanac Realty Investors LLC
- Angelo, Gordon & Co., L.P.
- Ares Management LLC
- Avenue Capital Group
- Bell Partners Inc.
- BlackRock Real Estate
- Brookfield Asset Mgmt Inc.
- Cabot Properties, Inc.
- C-III Capital Partners LLC
- DRA Advisors, LLC
- Equus Capital Partners, LTD
- Exeter Property Group
- Fortress Investment Group
- Hines U.S. Office Value Added Fund LLC

- JP Morgan Asset Management
- LAI Real Estate Investors, LLC
- Latitude Management Real Estate Investors
- LEM Mezzanine
- O'Connor Capital Partners
- Paramount Group, Inc.
- PGIM Real Estate
- Ramius Capital Group
- Silverpeak Real Estate Partners
- Stockbridge Capital Partners
- Strategic Partners
- The Blackstone Group
- The Carlyle Group
- · UBS Realty Investors, LLC

#### **Farmland Advisor**

Prudential Agricultural Group

## **Venture Capital Fund Managers**

- · Adams Capital Management, Inc.
- Aisling Capital LLC
- Cross-Atlantic Capital Partners
- Jefferson Partners
- KBL Healthcare
- Landmark Partners
- LLR Partners
- Mid-Atlantic Venture Funds
- Novitas Capital
- Psilos Group Investors
- Quaker Bio-Ventures, Inc.
- SCP Private Equity Partners
- StarVest Associates
- Sterling Partners
- Strategic Partners
- Summit Partners
- TDH, Inc.
- Tenaya Capital

## **Private Equity Fund Managers**

- ABS Ventures
- Actis LLP
- APAX Partners LLP
- · Bain Capital Partners LLC
- Baring Private Equity Asia Limited
- Blue Point Capital Partners LLC
- Bridgepoint Capital Ltd
- Capital Group
- L Catterton Management Company LLC
- Cinven
- Coller Investment Management LTD
- Crestview Advisors LLC
- CVC Capital Partners Group

- Denham Capital
- Dubin Clark
- The Energy & Minerals Group
- Equistone Partners Europe Limited
- Evergreen Pacific Partners GP LLC
- First Reserve Corporation
- · GoldPoint Partners LLC
- HgCapital
- Huntsman Gay Global Capital LLC
- Incline Management Corp
- IPC Advisors
- KRG Capital Partners LLC
- Landmark Partners
- Lexington Capital
- Lindsay Goldberg & Bessemer
- Milestone Partners
- Morgan Stanley
- New Mountain Investments
- NGP Energy Capital Management
- Odyssey Investment Partners LLC
- Orchid Asia
- PAI Europe
- Palladium Equity Partners
- Partners Group Mgt VI LTD
- Permira
- Platinum Equity Capital Partners
- Quadrangle Capital
- StepStone Group
- Sterling Partners
- Strategic Partners
- · Trilantic Capital Management LLC

#### **Private Debt Fund Managers**

- Apollo Global Management, LLC
- Arrowhead Mezzanine
- Avenue Capital Group
- Black Diamond Capital Management, LLC
- Cerberus Capital Management, L.P.
- Clearlake Capital Group, L.P.
- Gold Hill Venture Lending 03, LLC
- GoldPoint Partners, LLC
- Oaktree Capital Management LP
- · Searchlight Capital Partners, L.P.
- Venor Capital Management, LP
- Versa Capital Management, LLC
- Windjammer Capital Investors

#### **Custodian Bank**

The Bank of New York Mellon Corporation

## **Securities Lending Agent**

· Deutsche Bank AG

# **Investment Accounting Application Service Provider**

• Financial Control Systems, Inc.

# **Proxy Voting Agent**

• Glass, Lewis & Co., LLC

# **General Investment Consultant**

Aon Hewitt Investment Consulting (AHIC)

## **Private Markets Investment Consultant**

Portfolio Advisors, LLC

#### **Real Estate Investment Consultant**

• Courtland Partners, Ltd.

# **Hedge Fund Consultant**

· Aksia, LLC