Our proposal to serve the

Ohio Retirement Study Council

31 December 2015





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Bethany Rhodes, Director Ohio Retirement Study Council 88 East Broad St., Suite 1175 Columbus, OH 43215 31 December 2015

Dear Bethany,

Thank you for the opportunity to submit a proposal to the Ohio Retirement Study Council (ORSC) to identify areas of strengths and weaknesses for the School Employee Retirement System (SERS), compare SERS operations with leading practices and make recommendations for improvement. Based on our understanding of your goals and mandates as the Ohio pension oversight council, we are confident our team, experience, approach and new perspective will make Ernst & Young LLP (EY or the US firm) the best choice for ORSC.

EY is a leading professional services organization that prides itself in the diversity of education, experience and capabilities of its professionals. We provide candid, objective approaches to our clients' business problems. We have not supported ORSC or SERS with respect to the fiduciary audit/findings and recommendations in the past and bring a new perspective. We recognize that the 2013 report was conducted by another advisory firm. We will conduct our assessment independently as well as review prior work performed (i.e., 2013 fiduciary audit) against our findings and what has changed since the release of the report (e.g., determining if key recommendations were addressed or if processes have been changed).

We understand the importance of this project and have carefully considered your requirements. ORSC seeks a firm that can offer the capabilities and experience to perform a fiduciary performance audit of SERS in order to identify areas of strengths and weaknesses in SERS, compare SERS operations with leading practices of other public pension plans and make recommendations for improvement. You are seeking a firm that is objective and that has experience performing similarly fiduciary performance audit projects on large public pension plans. Finally, you need a firm that knows how to work with and serve state governments. We believe EY is the firm best suited to help you meet your needs for the following reasons:

- Our diverse and specialized team with the experience you seek We have constructed a team that has deep knowledge in the public sector pension systems and cross-functional experience with asset managers and asset servicers. This team is supplemented by subject-matter advisors with targeted experience for specific subject areas (e.g., technology, cybersecurity, human resources / organizational models, regulations).
- Project experience to provide ORSC with actionable direction We have deep experience with business models and processes of pensions and institutional investors, alternative and traditional asset managers, and asset servicers (e.g., custodians, prime brokers and administrators) and state government entities. By previously conducting similar projects on pensions and other institutional investors and asset managers, we will be able to bring valuable recommendations and guidance for ORSC.
- A proven approach to meet your needs We have developed a proven and flexible methodology for conducting operations assessments and fiduciary audits for organizations similar to ORSC.
- ▶ Industry leadership and commitment to the state of Ohio We are dedicated to the pension and retirement industry servicing clients, developing thought leadership, continually investing in our teams and actively participating in industry events (e.g., P2F2, SIFMA, Opal). Additionally, the state of Ohio is an EY priority account and a relationship we value. We are committed to ensuring success for the state and bringing our highest-quality team members to our engagements.

We are flexible to accommodate ORSC and SERS by tailoring our approach to be considerate to stake holders schedules and work with you to meet any specific deadlines

On behalf of EY, we truly appreciate this opportunity to serve ORSC with fiduciary performance audit services. We look forward to demonstrating our commitment to provide the high level of quality service that you expect from us. If you have any questions or would like additional information, please do not hesitate to contact us, Dan Bender at +16174257301 or Belal Khalid at +12127730827.

Sincerely,

Ernst + Young LLP

Table of contents

Proposal summary	1
Capabilities and experience	.11
Staff qualifications	.18
Experience summaries	.26
Management plan	.30
References	.32
Methodology, work product and timeline	.33
Additional information A: What EY will deliver	.41
Additional information B: Peer review	.43
Additional information C: Resumes	.44
Glossary	.54
Cost information	55

Proposal summary

Our understanding

We understand that the ORSC is seeking a fiduciary performance audit evaluation of the organizational design, structure and practices of SERS. ORSC has provided six key focus areas, including board governance and administration, organizational structure and staffing, investment policy and oversight, legal compliance, risk management and controls, and IT operations.

EY is fully aware of the requirements mandated from both the state of Ohio and the ORSC on pensions, as well as the impact these regulations have on SERS. We understand that ORSC requires all five of its retirement systems to examine their financial conditions, as well as state law that requires that SERS have adequate funds to pay pension promises within 30 years. In order to stay within this time frame, we also understand that recent reform changes were made. Senate Bill 341 gave the SERS board the authority to adjust future age and service change, which resulted in an increase in the age and years of service requirements that determine a member's retirement eligibility. Going forward, EY understands the importance of this legislatively mandated 30-year funding period.

Our diverse and specialized team

Based on the scope of the fiduciary audit and asset class exposure of SERS, we have carefully selected our core engagement team along with subject-matter advisors that have deep domain experience, including the following:

- Board governance and administration
- Human capital and organizational structure
- Investment policy
- Legal and compliance
- Risk management
- ▶ IT operations
- Operational assessments and design
- Pension fund and other institutional investor business practices
- Data management and analytics
- Technology architecture

Members of our team have held leadership positions at pension systems and other institutional investors and/or have provided front-to-back assessments of peer organizations. Our formidable capabilities across these areas allow us to execute a proven approach with the right resources to conduct the current state and comparative/benchmark analysis resulting in actionable future state recommendations.

Please refer the "Capabilities and experience," "Experience summaries," "Staff Qualifications" and "Additional information C: Resumes of Subject Matter Advisors" sections within this proposal for more information on the experience, qualifications and skill sets of our team members.

EY Leadership spotlight

Below is a snapshot of key resources that are proposed to play an active role on the engagement. The Staff Qualifications section of this proposal includes the core team resumes and "Additional information C: Resumes of Subject Matter Advisors" includes subject matter advisor resumes (whom we expect to call upon throughout the engagement).

Josef Pilaer



- Josef leads EY's Global Pension and Retirement Market Segment working across our Government and Public Sector practice as well as our Financial Services practice.
- He has more than 20 years of strategic and operational experience in Asia-Pacific, Europe, Brazil and North America.
- He works with many leading Pension and Retirement providers along the value chain, including public and private sector pension funds, life insurers, retail banks, asset managers and wealth managers globally to protect, improve and grow their businesses.

Dan Bender



- Dan is an executive director with over 24 years of combined consulting and financial services industry experience advising pension systems, public plan sponsors and asset management firms on matters relating to operations and regulatory risk.
- He has extensive experience with enhancing the design, implementation and governance of core asset management and public plan sponsor processes, including the following:
 - Assessing/enhancing operating models
 - Risk oversight and regulatory compliance programs
 - Designing and implementing periodic monitoring and forensic testing programs
 - Assessing the impact of regulations and developing response strategies
 - Conducting due diligence of service providers, sub-advisers and private funds

Belal Khalid



- Belal is an executive director in the Wealth and Asset Management Advisory practice of Ernst & Young LLP with 20 years of combined consulting and financial services industry experience advising large investment management firms, broker dealers, prime brokers and asset managers. He has extensive experience in the following:
 - Design of future state operating model
 - Risk and controls assessment
 - Legal entity rationalization and data governance and management
 - Vendor selection and contract negotiation
 - System design and implementation
 - Regulatory compliance with derivatives regulations, including Dodd-Frank
- He has advised some of the largest investment management firms with over a trillion dollars in assets under management (AUM) on matters involving operations strategy, regulatory compliance, risk and controls improvement, and operational risk management.
- He has advised prime brokers on legal entity rationalization, multi-jurisdictional matters, trading and execution controls, technology rationalization and technology strategy, and cost optimization.

Ryan Burger



- Ryan is a senior manager with 11 years of experience with a core focus on reviewing investment operations and accounting processes and controls. Functional areas reviewed include covering end-to-end processes, including trade processing, operations, accounting, treasury, legal, HR, tax and technology
- His clients have included institutional investors (pensions, government agencies, investment arms of banks and insurance companies), asset managers (hedge funds, private equity, real estate funds), as well service providers (fund administration, middle office outsourcing and prime services). Projects for these clients have included the following:
 - Process, risk, control and governance assessments (findings and recommendations)
 - Target operating model design
 - Business requirements and end-to-end process documentation
 - System selection and implementations (portfolio accounting, partnership accounting, general ledger, Customer Relationship Management (CRM) and tax solutions
 - Onboarding of investment managers to outsource providers

Our proven approach and work product overview

Our team has significant experience working together across public pensions and asset managers (both traditional and alternative strategies) as well as other institutional investors in these areas (several of whom also have held leadership positions at these firms). We will leverage knowledge from prior engagements and from our team's prior leadership positions in industry. We will also leverage pre-defined templates, accelerators or EY methodologies, such as our proven current state/future state CORE methodology wherever possible.

EY understands the breadth of skill sets, depth of experience and independence required to accomplish ORSC's objectives. Our integrated team has extensive experience across the in-scope areas and capabilities that are required by ORSC for this initiative. We have developed an approach as outlined in the "Methodology, work product and timeline" which covers all in-scope areas where a core team will be responsible across all functional areas (aligned to sections 2.1-2.6 in the RFP), with section specific subject matter advisors aligned to each of these sections, as well as pension and asset management subject matter advisors to call upon across all function areas. Our scope is advisory in nature based on the scope and requirements outlined in the RFP which we refer to as a findings and recommendations assessment (in accordance with AICPA Consulting Standards).

We propose a four phased approach, beginning with project planning and mobilization. At the inception, we will hold a kick-off session with key stakeholders to confirm the goals and objectives of ORSC and SERS, and any key challenges and painpoints. Prior to and throughout the engagement, we will request access to existing SERS materials (existing organization charts, board meeting minutes, policies and procedures and other documentation) in order to most effectively target interview questions and documentation that EY will produce for SERS. Additionally, in order to execute the assessment in line with ORSC's objectives, on budget and within in a timely fashion, we will create a detailed project plan and other project management documents that will be leveraged throughout the engagement (e.g. project plan, status updates) and shared with and ORSC as agreed upon (during engagement kick-off).

We will mobilize immediately into a current state assessment in which we will interview and conduct walkthroughs and working sessions with key stakeholders. In these sessions, we will take meeting minutes and notes that will form the basis of our findings and issues summary, which form the foundation for later recommendations and will be included in the final findings and recommendations report. Additionally, we will leverage information gathered in interviews and existing documentation to produce current state process and functional diagrams. Based on our understanding of the overall current state at SERS, we will hold initial industry insight sessions and will produce a preliminary assessment of comparability of SERS practices to leading practices.

We will then dive deeper into performing industry analysis by working with SERS to develop key criteria to benchmark SERS' processes against leading and peer practices. We will use these criteria to develop questionnaires which we will review with EY Subject Matter Advisors, and may distribute to industry peers for feedback (depending the sensitivity we can make this activity confidential). The information gathered will be compiled into documentation of industry leading practices across all scope sections. This will feed into a high-level gap analysis assessment, which will then, together with the findings and issues summary, be leveraged to draft preliminary recommendations and improvement opportunities. Throughout, we will facilitate work sessions with process owners to vet and evaluate documentation we produce, gaps identified, and discuss leading practices.

In the final phase of the engagement, "Recommendations and improvement opportunities," we will spend time brainstorming and challenging key considerations and recommendations, vetting improvement opportunities with key stakeholders, and developing and vetting a prioritized roadmap. All analysis will culminate into a final findings and recommendations report that includes all final documentation from all phases of the product (as detailed in the "Detailed work plan" part of the "Methodology, work product and timeline" section of this proposal).

We have also outlined alternate approaches that ORSC may consider (as outlined in Additional Information A). As such, throughout the remainder of this proposal, we refer to ORSC's request for a fiduciary audit as a request for findings and recommendations report. We welcome the opportunity to further discuss options.

Industry leadership and our commitment to the state of Ohio

We are a leader among pension and retirement industry clients. We continually invest in developing our industry professionals, actively participating in industry events (e.g., P2F2, SIFMA, Opal) and develop thought leadership used widely throughout the industry.

EY is known for its asset management sector knowledge, relationships with the industry's key stakeholders and strong global capabilities. Clients see us as the most globally connected organization among the Big Four. Both our Wealth and Asset Management and Government and Public Sector (GPS) sectors are dedicated to offering you comprehensive industry insights by coordinating a network of more than 15,000 professionals focusing on asset management and 19,000 professionals focusing on the government sector.

EY's global reach and deep industry experience

EY has a global presence serving the world's leading pension systems and asset management firms and their service providers.

Pensions

- Provide services to 60% of the top 20 global pension funds
- Provide tax services to 45% of the top 20 global pension funds

Global asset managers

- Audit funds at 52% of the top 25 global asset managers
- Provide services to 96% of the top 25 global asset managers
- Provide tax services to 92% of the top 25 global asset managers
- Provide advisory services to 84% of the top 25 global asset managers

Hedge funds

- ► Audit approximately 40% of the top 100 global hedge funds
- Provide services to approximately 70% of the top 100 global hedge funds
- Provide advisory services to approximately 15% of the top 100 global hedge funds

Private equity

- Provide services to 92% of the top 25 global private equity firms
- Provide assurance services to 52% of the top 25 global private equity firms
- Provide tax services to 88% of the top 25 global private equity firms

Asset servicing presence

- ► Provide advisory services to 9 of the top 10 largest fund administrators
- Provide services to 100% of the top Prime Brokers by assets
- Provide services to 100% of the top 10 Global Custodians by assets

Our commitment to pensions and retirement systems

EY has a history of serving some of the largest public and private pension funds around the world and in the US. In 2014 and 2015, recognizing the challenges in the aftermath of the global financial crisis, EY launched an annual global study to focus on building a better retirement world and help pensions and retirement systems achieve their commitments to citizens and members. For this analysis, we conduct more than 80 interviews with top representatives in approximately 20 countries across the Americas, Asia-Pacific and Europe. These are held with governments, policymakers, regulators and pension industry executives within asset management, insurance and pension funds.

The pension and retirement challenges require significant behavioral change from many stakeholders to rebalance and adjust their expectations in line with five key tenets: financial adequacy, financial stability, investment performance, efficiency and effectiveness, and political support. Josef, Dan, Belal, Ryan and many other team members at EY are committed to assisting the industry with navigating this change.

Our Pension and Institutional Investor Advisory practice

Specifically, EY's Pension and Institutional Investor Advisory practice consists of an industry leading team of consultants with deep and diverse backgrounds with experience in investment policy analysis, board composition and administration, human capital, legal, compliance, IT and project management. The Pension and Institutional Investor Advisory Services group at EY offers a suite of assessment and operational improvement services to pension systems and institutional investors with extensive experience with the investment operations and accounting functions. We work directly with clients to develop a strategic framework and transformation program to address their process, organizational and technology challenges. Our team brings leading practices based on the collective knowledge gained from our vast client engagements combined with the team's diverse prior backgrounds across the financial services industry.

The core Pension and Institutional Investor Advisory Services team includes team members with experience with traditional and alternative (hedge, private equity, real estate) asset class operations and accounting processes and is supported by EY's broader asset management and government network of competencies, including regulatory, tax, valuations, transactions, IT, data, etc. Our collective experience serving pensions, institutional investors, and asset managers paired with our global network of financial services gives us a unique ability to help firms serving the pension and institutional investor sector to meet their challenges and provide actionable recommendations for improvement.

Industry involvement that makes a difference

Our engagement team is involved and supports the industry through our active involvement in various forums and groups, including the following:

- P2F2 (public pension fund forum) multiyear sponsor
- Association of Institutional Investors (All)
- National Association of State Retirement Administrators (NASRA)
- Opal Public Funds Summit (for public fund officers and trustees) – engagement team involvement
- Opal Police, Fire, EMS, and Municipal Employee Pension & Benefits Seminar – engagement team involvement
- ▶ ICI Accounting & Treasurers Committee advisor
- AICPA Investment Company Expert Panel member
- NICSA board member
- Managed Funds Association (MFA) strategic partner
- Member of SIFMA's Asset Managers Forum
- The Spaulding Institute
- SunGard Asset Management Annual Summit multiyear sponsor
- ► SIFMA Complex Products Forum sponsorship
- ► GAAIM Attendance
- Institutional Investor CFO/COO Summit Panel speaker and attendee
- Skybridge Alternatives (SALT) Conference Attendee
- Institutional Investor Hedge Fund Awards Sponsorship
- Private Equity International (PEI) Operating Partners
 Forum sponsorship
- Finance Research Association (FRA) Private Equity Operations and Compliance Forum sponsorship

EY's Wealth and Asset Management awards

- Outstanding Contribution to Wealth
 Management Thought Leadership 2014
 Wealth Briefing Award
- ► EY ranked #1 for outstanding service to the HF industry (as well as in all 6 categories accounting firm, for tax, for audit, for regulatory/compliance, for client service and for HF expertise) 2014 Institutional Investor Alpha
- ► Best Advisory Firm 2013 HFM Week

The state of Ohio as a priority

The state of Ohio is an EY priority account and a relationship we value. We are committed to ensuring success for the state and bringing our highest quality team members to our engagements.

Our Government and Public Sector Center practice is a diverse network of 19,000 professionals skilled in auditing, accounting and budgeting methods, systems and controls that today's government clients need. We offer multidisciplinary teams composed of professionals with a range of industry and technical experience. These professionals bring the skill sets, experience and relevant working knowledge of serving governments similar to ORSC. Several of our professionals are former policymakers and senior executives or served as department heads within government agencies. This group of professionals keeps close tabs in the industry they serve through a variety of networks to make certain they deliver current relevant advice to our clients.

The Government and Public Sector Center (the Center) brings our industry experience to life for public sector clients like the ORSC. We achieve this by sharing our knowledge with clients and our professionals through publications, learning events and webcasts.

EY combines private sector leading practices with an understanding of the public sector's diverse needs, focusing on building your capability to deliver improved public services. In short, the Center is where people and ideas come together to work with governments in addressing the issues of efficient government and enhanced public services to benefit the citizens we serve across the globe. Serving hundreds of clients, our professionals have decades of experience with the systems, programs and issues facing the public sector.

With our Government and Public Sector Center, you gain the following:

- ▶ Tailored services and approaches specifically for the government and public sector
- Relevant and timely insight on government public sector issues and pronouncements
- A strong bench of professionals to provide high-quality service
- The ability to better understand and manage government public sector risks
- Consistent industry training of our people
- The ability to better anticipate regulatory changes and shifts
- Proactive insights and relevant practical thought leadership

EY thought leadership that delivers value

EY makes considerable investments in providing thought leadership on key industry issues and the evolving Pension and retirement, Governance, risk and compliance, IT and risk management, Hedge funds and institutional investor, Traditional asset management, Private equity, Real estate, and Asset servicing industry landscapes. We take an active role to support our clients and foster industry dialogue among established market participants, regulators and emerging players on pressing industry issues and critical topics. In our market activities we host a variety of events, conduct benchmarking studies, publish a broad set of publications, meet with organizations across all major jurisdictions and develop proprietary solutions that we bring to our clients.

Pension and retirement



The \$500 trillion prize - A customer-centric vision for the global pensions and retirement market - 2015 EY global pension survey



Building a better retirement world -Insights for better outcomes in the global pension and retirement market - 2014 EY global pension survey

Governance, risk and compliance



Centralized operations: The future of operating models for Risk, Control and Compliance functions



Improve your business performance: Transform your governance, risk and compliance program

IT and risk management



Addressing the evolving challenges of IT risk



2015 risk management survey of major financial institutions: Rethinking risk management

Hedge funds and institutional investor



The evolving dynamics of the hedge fund industry -2015 EY Global Hedge Fund and Investor Survey



Shifting strategies -Winning investor assets in a competitive landscape -2014 EY Global Hedge Fund and Investor Survey

Traditional asset management



Global Investment Operations Survey: Managing complexity and change in a new landscape



Seeing Beyond: Unlocking the Long-Term Opportunities in Wealth and Asset Management -2015 Forbes Survey in collaboration with EY and SEI

Private equity

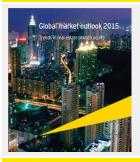


Positioning to win: 2015 global private equity survey



Navigating the headwinds: 2014 global private equity survey

Real estate



Global market outlook 2015: Trends in Real Estate Private Equity



Financial report briefs: What you need to know about this quarter's financial accounting, financial reporting and other developments

Asset servicing



New opportunities in asset servicing - 2015 EY Asset Servicing Survey



Second generation outsourcing in the asset management industry

Requested general information

Your firm's primary contact for ORSC staff use and, if different, for SERS Staff use during the audit.

Ryan Burger and Doug Montone (core team leads) will be EY's primary contacts for ORSC staff during the engagement. Ryan can be reached at $+1\ 212\ 773\ 7130$ and Doug can be reached at $+1\ 212\ 773\ 7404$.

Ryan and Doug will serve as the Primary Consultants and will be responsible for interacting and communicating with ORSC regarding project status, issues and next steps. We expect that key stakeholders would be involved in daily communications with the engagement team. Ryan and Doug will provide a formal update to ORSC on a weekly basis (or more frequently if requested by ORSC) regarding project status and next steps. Issues and risks would typically be reported as they arise or as soon as practicable. Issues and risks with high impact will be escalated to the engagement partners, Belal Khalid and Dan Bender and they will be responsible for the overall delivery and risk management on the engagement.

Ryan and Doug will assign project management functions and work stream leads in accordance with the project scope and requirements. The EY team will notify ORSC as to which specific individuals will be the points of contact for project work streams.

To help ensure project quality a Quality Assurance Executive (QAE) will be assigned to the engagement. Quality Assurance Executives play a key role in helping engagement teams provide service quality; their role includes risk management, delivery excellence, client experience and a certain level of compliance. Engagement teams should expect QAEs to serve as a catalyst, mentor, advisor and ambassador throughout pursuits and engagements.

In addition, quality control is the responsibility of each team member. All work products will be reviewed by the engagement manager and senior managers and final deliverables will be reviewed by the engagement partner. The team will be required to employ a second reviewer for high-impact items and final deliverables. Research and support functions would be coordinated by the Senior Manager and carried out by each team member as required by resource needs. Additionally, the engagement team will involve subject-matter advisors where specialized skills, leading practices or point of view is required.

General ownership structure of your organization, including subsidiary and affiliated companies, and joint venture relationships.

Ernst & Young LLP is a private limited liability partnership. The firm is owned by over 3,000 US partners and principals and is a member of Ernst & Young Global Ltd., an organization whose locally owned member firms operate under the EY name in approximately 150 countries around the world. EY refers to the global organization of member firms of Ernst & Young Global Limited, each of which is a separate legal entity.

For more information on organization ownership and risk and independence practices, please reference our US Transparency report at the below URL.

http://www.ey.com/Publication/vwLUAssets/ey-us-transparency-report-2015/\$FILE/ey-us-transparency-report-2015.pdf

Information regarding any material change in your firm's structure or ownership within the last eighteen months, or any material change in ownership, staff, or structure currently under review or being contemplated by your firm.

We have not experienced any significant developments in our organization or ownership structure in the last 18 months. However, we recognize that, like our clients, we have to adapt now to our changing world to stay ahead of the competition and become even more relevant in the eyes of our stakeholders. Among our efforts to achieve our goals, EY firms routinely consider strategic acquisitions to expand capacity and/or business. The details of specific acquisitions under discussion by the US firm are confidential; however, none of these acquisitions, individually or in the aggregate, would have any adverse impact on the service the US firm is proposing to deliver to the ORSC.

If available, a third-party assessment or report concerning client satisfaction and measures of your firm's strengths and weaknesses.

The Sarbanes-Oxley Act of 2002 requires the Public Company Accounting Oversight Board (PCAOB) to conduct annual inspections of registered public accounting firms that provide audit reports for more than 100 issuers. PCAOB inspection staff review components of selected issuer audits performed by these firms. These reviews may identify deficiencies in the conduct of audits that indicate deficiencies in the design or operation of certain aspects of a firm's system of quality control over audits of issuers. PCAOB inspection staff also review the design, and in

some cases the application, of policies and procedures related to certain firm quality control processes that could be expected to influence audit quality.

Each year, the PCAOB publicly releases Part I of the report, which describes matters that it considered to be deficiencies in the performance of the audits that it reviewed. Any criticisms of a firm's quality control system are discussed in the non-public Part II portion of the report. Pursuant to the Sarbanes-Oxley Act, such findings remain non-public unless the firm fails to address them to the PCAOB's satisfaction within 12 months of the report date.

We take all PCAOB observations seriously and have taken, and continue to take, substantive remedial actions to address all matters raised in PCAOB inspection reports. We will continue to take actions to improve the consistency and quality of audit performance, and we are committed to continually enhancing our system of quality control.

Additionally, KPMG, LLP (KPMG) completed the last two peer reviews of EY's non-SEC audit practice for the years ended 30 June 2010 and 30 June 2013, and issued its opinions dated 6 December 2010, and 6 December 2013, respectively. The peer review results confirm that our firm's system of quality control for our accounting and auditing practice applicable to non-SEC issuers meets the requirements of the quality control standards for an accounting and auditing practice established by the AICPA and is being complied with, providing the firm with reasonable assurance of compliance with applicable professional standards. A copy of our most recent peer review can be found in the Additional Information section B below.

Any material litigation to which your firm is currently a party.

The US firm, as is true of all major accounting firms, is involved in litigation in the normal course of our professional activities. We also participate from time to time in SEC and other regulatory inquiries. We are not aware of any litigation or regulatory inquiry which is relevant to, or would have a material impact on, the ability of the firm to continue serving its clients.

The US firm maintains a comprehensive professional indemnity insurance program that is continually monitored and modified so as to provide the firm with coverage considered appropriate in the current operating environment. We believe our coverage is commensurate with that carried by the other Big Four firms.

A list and brief description of litigation brought against your firm by existing or former clients over the last five years.

As noted in the previous question, the US firm is involved in litigation in the normal course of our professional activities. We are not aware of any litigation or regulatory inquiry which is relevant to, or would have a material impact on, the ability of the firm to continue serving its clients.

A list of any professional relationships involving the ORSC, the five Ohio public retirement systems, the State of Ohio, or its political subdivisions for the past five years, together with a statement explaining why such relationships do not constitute a conflict of interest relative to performing the proposed review.

We have performed a preliminary independence assessment of all ongoing services provided to the ORSC, the five Ohio public retirement systems, the State of Ohio, or its political subdivisions for the past five years by our firm, and no significant matters were identified. Our independence review is designed to identify, resolve and document our conclusions regarding specific, independence-related matters relating to the potential acceptance of an engagement. The procedures include the following:

- Reviewing covered people in the United States for financial relationships with the client
- Identifying former EY partners and/or employees who may be employed in key positions at the client
- Identifying business relationships that might exist between the client and EY
- Identifying proscribed non-audit services provided to the client
- Making specific inquiries of the client's management

Independence is the foundation of our profession and our firm, and we work with great diligence to maintain it. We have expended a substantial effort to establish a robust, global independence program aimed at complying with the multitude of requirements of various regulators.

Capabilities and experience

The matrix below outlines the correlation of selected project engagements performed by the team to the capabilities requested of the proposed team. Our prior experience in conducting this analysis is critical as we address areas of strengths and weaknesses in SERS, compare SERS operations with leading practices of other public pension plans and make recommendations for improvement. These past projects span both the public and private sectors and cross many of the areas of focus for the ORSC.

The recent projects outlined with a yellow box are mentioned in the subsequent pages and provide details of the engagements where we feel the scope is highly relevant to the scope of work that ORSC is seeking.

						Key	criteria align	ed to projects			
#	Relevant experience	EY team member	Public pension fund	Internal trading and trade processing operations	Reviewing internal operational and investment risk controls	Ancillary functions (i.e., cash mgmt., sec lending)	External advisor selection processes	Investment accounting and performance processes	Staffing, structure, and employee satisfaction	Incentive compensation	Asset and liability study and DB investment policy
1	Private Equity operating model review for major public pension. Key focus on IBOR vs. ABOR, Ops DD, and fee booking and recalculation model. Reference recent case study #1 for additional detail	Ryan Burger	√		✓	√		✓			
2	Op model assessment for government pension fund. Framework for policies, procedures and governance in investment management				✓	✓		√	√		
3	Advisor DD definition for public pension fund moving to direct investment model	Dan Bender	✓		✓		✓				
4	Investment function review for large public trust fund. Analyzed investment holdings and performance	Dan Bender	~	√	✓		√				
5	Pension fund setup for leading global government pension fund. Developed and implemented Op model, process and technology requirements for investment, back office admin and distribution	Josef Pilger	1	✓	✓						
6	Risk assessment for public pension sector fund to improve performance of investment operation and risk management	Josef Pilger	√		√						√
7	Risk assessment at leading pension back office administrator to identify strategic and operational risk	Josef Pilger	~		✓						

						Key	criteria align	ed to projects			
#	Relevant experience	EY team member	Public pension fund	Internal trading and trade processing operations	Reviewing internal operational and investment risk controls	Ancillary functions (i.e., cash mgmt., sec lending)	External advisor selection processes	Investment accounting and performance processes	Staffing, structure, and employee satisfaction	Incentive compensation	Asset and liability study and DB investment policy
8	Services and Op Model for global pension service provider to develop competitive service offering and op model	Ryan Burger				√	✓	√			
9	Risk assessment at multi-strategy asset manager. Reference recent case study #3 for additional detail)	Ryan Burger Samer Ojjeh,		√	√	√		~			
10	Controls assessment at global asset manager	Dan Bender			✓	✓		✓			
11	Op model and admin at multi-strategy asset manager. Validation of compliance controls over core portfolio management	Samer Ojjeh, Ryan Burger, Douglas Montone			√	√		√	✓	√	
12	Org assessment at alternative asset manager to review middle- and back-office operations are in line with industry standards	Samer Ojjeh			✓			√	✓	√	
13	Ops and tech strategy for asset manager	Belal Khalid		✓	✓	✓		✓			
14	Risk assessment at Prime broker. Conducted front-to-back risk and controls review included trading, operations, compliance, client reporting, legal entities, tax, and financial and regulatory reporting. Reference recent case study #5 for additional detail	Samer Ojjeh, Belal Khalid		√	√	√					
15	Cyber sec. and risk review at traditional asset manager. Reviewed risks identified across the treasury functions and cash wiring related processes and identified the controls used to manage and mitigate risks.	Belal Khalid		V	,	,					
16	Develop stochastic asset allocation model and recommend asset allocations for public sector fund	Adam Berk	✓								√

						Key	criteria align	ed to projects			
#	Relevant experience	EY team member	Public pension fund	Internal trading and trade processing operations	Reviewing internal operational and investment risk controls	Ancillary functions (i.e., cash mgmt., sec lending)	External advisor selection processes	Investment accounting and performance processes	Staffing, structure, and employee satisfaction	Incentive compensation	Asset and liability study and DB investment policy
17	Operating model definition and onboarding of the middle office functions to support a large managed account relationship for a top 10 US public pension. Reference recent case study #2 for additional detail	Rose Sullivan	✓	√	√			√			
18	Produce organizational and governance model, and assess risks and controls for an Investment management organization. Reference recent case study #4 for additional detail)			~	~			~	~	*	

Selected engagement case studies

Outlined below are case studies of recent projects performed by the team that are relevant to the scope outlined in the ORSC request for proposal for a fiduciary performance audit of SERS

Client	Top ten US public pensions (in terms of AUM)	team member(s) involved	Ryan Burger						
Background	EY was engaged to assess the following: Current operating processes and supporting technologies to identify challenges and areas for opporting and provide operating model recommendations for its private equity division (investing in external managers and/or external manager co-investment arrangements) Evaluate its private equity accounting and reporting processes in comparison to industry peers Key areas of focus for industry analysis and recommendations included the following: Data and Information flows between client and 3rd Party service provider book of record maintenance (IBOR and ABOR) Operational due diligence (ODD) of fund managers Fund expense transparency and accounting								
EY's role	 EY's approach: Conducted stakeholder interviews across various groups and investment record keeper), reviewed documentation Produced meeting summaries for each session Produced activity matrix and interaction diagrams detailing handoffs, technologies used, manual or offline processes Developed findings/challenges faced in the current operaprocesses and complexities Identified 3 key decision drivers that helped to frame the Better alignment of methodologies for accounting a party service providers Enhancing scalability of operational processes, people improving operational risk appetite and mitigation 	in, and conducted walk-throusing processes (including into s, and challenges faced) ating environment and docube recommendations:	igh sessions. ernal and external imentation of						

ΕY	provided value to client as follows:
>	Developed documentation of current processes and challenges for stakeholders to reference
>	Proposed operating model options to increase efficiency and controls for processes across internal business units as well as with third party service providers. The proposed options aim to reduce manual hand off points and inconsistent data recording methodologies and increase controls
>	Provided pros and cons of the various recommended options with various decision criteria (i.e., alignment of methodologies, risk mitigation, scalability) rating for each option by key focus and level of effort to implement the changes
•	Leveraged subject matter advisors (i.e., government technical accounting advisors and financial statement and control auditors) who were able to provide knowledge on industry leading practices and information for 15 peer institutions. The peer analysis provided a holistic view on industry trends and best practices to help the client better understand its position compared to its peers
	 Provided recommendations for the three key focus areas 1) Data flow processes and maintenance 2) Operational due diligence, and 3) Fund expense transparency and accounting
>	For the data flow processes and maintenance key focus area, the team provided various options to both support internal accounting and performance record keeping or leveraging a 3rd party (as well as shadow processing) and the estimated costs and other impacts associated with each option
	* * *

Board Governance and Admin 2.1	Organizational Structure and Staffing 2.2	Investment Policy and Oversight 2.3	Legal and Compliance 2.4	Risk Management and Controls 2.5	IT Operations 2.6
✓	✓			✓	✓

Client	Top-Tier Asset Manager on-boarding of Public Pension separately managed account EY team member(s) involved Rose Sullivan
Background	 Having recently won a mandate to manage a \$500 million separately managed account for a large public pension fund the client engaged EY to assist with on-boarding of both the client and the client's service providers (e.g., fund administrator) The scope of the program included development of implementation plan around middle office functions, reporting requirements, fund administration, day one readiness and future state design
EY's role	 EY's approach involved four distinct elements: Organizational and functional assessment conducted to determine how current Operations and Compliance functions would support new client, trading strategies and instruments and third party service providers Client on-boarding plan was developed for the initial asset take-on, day-one portfolio re-allocation and future state portfolio investments to comply with the investment guidelines set-forth in the investment management agreement Portfolio Accounting and Compliance Systems evaluated and enhanced to accommodate multi-faceted pre and post trade compliance rules and reporting, client and oversight reporting and a complex fee structure. Systems were also configured to coordinate with the public pension's third party service provider Operating model developed to support on-boarding of additional pension and other institutional assets via either separately managed accounts for asset managers

Led the client in development of organizational and functional roadmap to support the separately managed account EY subject matter advisors provided industry leading practices with regard to client on-boarding,	Board Governance and	compliance and risk manager EY managed the PMO function office, client reporting, technology enhanced a secondary impleaded and technology enhanced. Organizational Structure and	on coordinating wit ology, as well as the ementation plan to	ne public pension and increase scalability b	l its third party servic by process improvem	e providers
EY provided value to client as follows:	How EY made a	 Led the client in development managed account EY subject matter advisors presented 	t of organizational rovided industry le			, ,

Client	A leading multi-strategy global altowith presence in the US, Europe are over \$24b dollars in assets under investment strategies spanning actincome (including bank loans), der swaps, credit default swaps), etc.	nd Asia. The firm ha management with ross equities, fixed	member(s) involved	Ryan Burger Samer Ojjeh					
Background	assessment across the organi (specifically for managing ope the cash wiring process. The scope of the assessment	assessment across the organization. The firm also sought to assess the current governance model (specifically for managing operational risk) for appropriateness, as well as perform a deep-dive review on							
EY's role	 EY's approach involved four distinct Risk and controls assessment operations, valuation and price management, bank debt, tech and recommendations were nidentify a strategy for remedi Organizational and technolog proposed governance models technology department. Operating model peer analysi comparable firms are structured been dive analysis of the cash based on the various types of 	was performed for cing, accounting, tr nnology, tax and ma nade for the future ation. ical governance re- were provided for s based on reviewered and leading pra n wiring process was	easury, investor rela arketing. These areas state. A prioritized r view was performed both the entire organ d functional areas wa ctices.	tions, compliance, less were assessed, cor isk matrix heat map where key issues we nization and more sp as provided to identi	egal, data npared to peers, was supplied to re identified and pecifically, the				
How EY made a difference?	 EY provided value to client as follows: Developed risk and controls matrix with impact of each risk as well as prioritized heat map for identification of high-, moderate- and low-risk areas. Provided a proposed governance model to remediate risks identified and identify risks going forward Created process flow documentations for the various types of cash wiring processes across the firm Leveraged subject-matter advisors who compared all the findings with industry leading practices. Provided recommendations to address the risks that were specific to functional areas as well as enterprise recommendations to address risks that were more thematic in nature across the organization. Provided a priority matrix and roadmap for all recommendations provided (across the various themes identified) 								
Board Governance and Admin 2.1	Organizational Structure and Staffing 2.2	Investment Policy and Oversight 2.3	Legal and Compliance 2.4	Risk Management and Controls 2.5	IT Operations 2.6				
✓	✓			✓	✓				

Client	An investment advisor specializing in growth equities EY team member(s) involved David Parks							
Background	EY was engaged to provide an assessment of an organization and governance model for an Investment management organization							
EY's role	functions, investment mandates within various pension funds and related risk management and governance frameworks. Our analysis focused on scope and formality of governance activities related to five key areas: Investment management decision making Organizational structures Compensation Span of control Reporting lines We held stakeholder interviews, documented key processes, leveraged existing documentation (e.g. relating to staffing and compensation, and investment management policies and documentation) to assist in understanding the client's investment management organization							
How EY made a difference?	 EY provided value to client as follows: We identified significant gaps that had been contributing to risks related to asset- liability matching, investment performance and the sustainability of the pension funds. We collaborated with the client to document and prioritize key controls to close these gaps Complete redesign of the investment management governance structure, including formal investment mandates and SLA's between the investment management teams and the pension fund boards Documented workproducts that included committee structures with formal mandates, policies and procedures and new and enhanced job descriptions Developed formal risk tolerances and metrics to enhance the effectiveness of governance related activities 							
Board Governance and Admin 2.1	Organizational Structure and Staffing 2.2 Investment Policy and Compliance 2.4 Risk Management And Controls 2.5 2.6							
✓	✓ ✓ ✓ ✓							

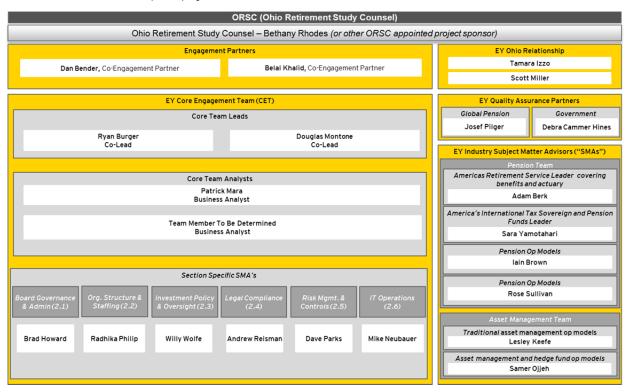
Client	A top-tier global prime broker US, Europe and Asia with abo revenue.			er(s) involved Bel	al Khalid					
Background	profitability challenges in requirements. The client assess its current operal The scope of the program	profitability challenges in one of its European jurisdictions because of increased regulatory capital requirements. The client made a decision to move to another jurisdiction in Europe and asked EY to assess its current operating model and design a new operating model for the target jurisdiction. The scope of the program included review of the governance, organization, functional model, risks and controls, management reporting, business strategy, clients' profitability and technology infrastructure,								
EY's role	 Organizational and performed were do management function designed. Risk and controls as execution, trade macompliance, risk marecommendations of the control of	 performed were documented and the current organizational and management hierarchy, various management functions and reporting lines were assessed and future organizational model was designed. Risk and controls assessment was done where the front-to-back functions, including trading and execution, trade management, reference data processes, reconciliations, settlement and clearance, compliance, risk management and financial reporting were assessed, compared to the peers, and recommendations were made for the future state. Technology assessment and redesign plan was done as the firm did not want to move suboptimal infrastructure to the new location. A comprehensive plan for the technology upgrade was developed and executed. 								
How EY made a difference? Board Governance and	 EY led the client in development of organizational and functional road map. EY led the risk and controls model which was used to assess all functions. EY provided subject-matter advisors who compared all the findings with industry leading practices. EY managed the PMO function of the project running internal client workshops and deep dives. EY made recommendations for improvement in processes, functions, organization and technology creating follow-up action items and development of a comprehensive implementation plan. Organizational Structure Investment Policy and Legal and Risk Management 									
Admin 2.1	and Staffing 2.2	Oversight 2.3	Compliance 2.4	and Controls 2.5	IT Operations 2.6					
✓	✓		✓	✓	✓					

Staff qualifications

People make a difference in professional relationships. We know that a responsive and qualified team with deep industry experience is important to the ORSC. We have assembled the right team with the right experience to serve your needs. Our team emphasizes the use of pension and asset management professionals who have a working knowledge of organizations similar to ORSC and are committed to building a strong relationship with you. Our team assembled to serve you will be supported by subject-matter resources, where needed.

Organization chart

Our commitment to the ORSC means that in addition to our experienced government and public sector team identified in the proposal, you will have access to local resources, leading industry and subject-matter professionals and other firm resources should your needs change or grow. The organizational chart below highlights our key team members to support ORSC on this project. Team member experience and role descriptions can be found on the subsequent pages.



We strive to maintain team continuity as a matter of policy and pledge to make a conscientious effort to provide staffing continuity at every level of your service team. In the event of an unavoidable staff change, we will promptly inform you and work together to identify a replacement with commensurate skills and experience. Furthermore, the entire service team will be responsible for sharing institutional knowledge and bringing any new team members up to date on the engagement, including your business environment and objectives. This will facilitate a seamless transition and mitigate disruption for your team.

Skillset matrix

Our proposed team has experience working with pension systems and other institutional investors, alternative asset managers, traditional asset managers, asset servicers, technology applications and accounting processes across the key areas outlined in the RFP. Below, we have additionally highlighted our experience in project management due to the importance during this type of engagement, as well as our experience with alternative assets, as we feel this is an area of complexity where we have in-depth experience.

Engagement team and Subject-Matter									
Advisors		Skills and experience							
Resources	Level	Board Governance & Admin 2.1	Organization Structure & Staffing 2.2	Investment Policy & Oversight 2.3	Legal Compliance 2.4	Risk Management & Controls 2.5	IT Operations 2.6	Project Management	Alternative Asset Management Experience
Dan Bender	Exec. Director	V	V	V	√	V		V	✓
Belal Khalid	Exec. Director	V	√	V	V	V	V	V	√
Ryan Burger	Sr. Manager	V	V	√	V	√	V	V	V
Doug Montone	Sr. Manager	V	√		V	V	V	V	√
Patrick Mara	Sr. Associate				V	√		V	V
Brad Howard	Sr. Manager	√		√				V	
Radika Philip	Exec. Director	√	√					√	
Willy Wolfe	Exec. Director	V	√	√	V	√		√	V
Andrew Reisman	Sr. Manager				V			V	
Dave Parks	Exec. Director	V	V	√	V	√	V	√	
Mike Neubauer	Exec. Director					V	√	✓	
Tammy Izzo	Partner					V	V	V	
Scott Miller						V			
Josef Pilger	Exec. Director	√	√	√	V	V	√	√	
Debra Cammer Hines	Partner	V	V	√				V	
Sara Yamotahari	Partner	V	√	V	V	V		√	
lain Brown	Partner	√	V	√		V		√	
	Principal	V	V	V	V	✓	V	√	V
Lesley Keefe	Exec. Director	V	V	√	V	V	✓	V	V
Samer Ojjeh		V	V	√		V	V	V	V
Rose Sullivan	Sr. Manager	√	√	√	V	V	√	√	V

Resumes of Ohio relationship team, engagement quality assurance partners, and core team members

The below resumes provide detailed background on the experiences and responsibilities of the on the EY team members we feel are best equipped, with functional and industry experience, to assist ORSC.

/ Ohio relationship team



Tammy Izzo

Partner

Columbus, OH +1 614 232 7415 tammy.izzo@ey.com

- Tammy is currently serving as our Central Region Government and Public Sector Leader. She has more than 24 years of experience serving the needs of global, complex clients in the automotive, manufacturing, and energy industries and leadership positions within East Central/North Central Regions over the years.
- She is also working as the Global Process Owner for Customer Relationship Management processes within EY.
- She has a strong broad background working with groups at Ernst & Young LLP on Office of the Chair accounts and Focus accounts across all services lines. Her experience includes the following:

 - Internal controls for the Sarbanes-Oxley Act (SOX) and new systems
 - IT Controls/Effectiveness
 - Accounting and auditing
 - Complex tax improvement projects
- She previously served as Coordinating Partner on a significant original equipment manufacturer automotive client, North Central Subarea Advisory Leader and Detroit Advisory market leader and also led Ernst & Young LLP's IT audit group and started in the Audit practice.
- She received her Bachelor of Science degree in Accounting from Miami University.



Scott Miller

Director

Cleveland, OH +1 216 583 2364 scott.miller2@ey.com

- Scott is a director at Ernst & Young LLP and has business development responsibility for National Tax. He has more than 25 years of experience and specializes in working with large employers to understand their needs.
- He has held a number of roles throughout his 16-year career with the firm, including serving as the EY Global Markets Client Program Director, the Tax Sales Leader for the New England area and a business development executive for several large employers. He has also held national roles with the firm's Assurance and Advisory practices.
- He received a BS from The Ohio State University and an MBA from the Kellogg Graduate School of Management at Northwestern University.

EY Proposed Quality Assurance Partners



Josef Pilger Partner Sydney, Australia +61 2 9248 4158 josef.pilger@au.ey.com

- Josef leads EY's Global Pension and Retirement Market Segment, working across our Government and Public Sector practice as well as our Financial Services practice.
- He has more than 20 years of strategic and operational experience in Asia-Pacific, Europe, Brazil and North America. He has worked in several strategic and operational industry and advisory roles servicing governments and leading organizations in the life insurance, asset management, wealth management and Pension and Retirement industry.
- He works with many leading Pension and Retirement providers along the value chain, including public and private sector pension funds, life insurers, retail banks, asset managers and wealth managers globally to protect, improve and grow their businesses. He provides strategic and operational advice in areas, including business strategy, market entry, growth, performance improvement, operations, distribution, member engagement and financial advice.



Debra Cammer Hines Partner Boston, MA +1 617 585 1981 debracammer.hines@ey.com

- ▶ Debra has over 10 years of experience in government and public sector consulting, in the areas of strategy and transformation, business analytics and optimization.
- She was selected as one of the Top 25 Consultants by Consulting Magazine in 2007 and a recipient of the 2009 University of Maryland Alumni Award for her professional achievements and humanitarian efforts. She is also a frequent writer and presenter on public sector management issues and coauthored the book, Managing Public Dollars: New Rules, New Roles, New Opportunities for Federal Financial Managers, a guide to Federal CFOs and financial manager, and has testified in front of the House Oversight and Government Reform Committee.

EY Proposed Engagement Partners



Dan Bender
Executive Director
Boston, MA
+1 617 425 7301
daniel.bender@ey.com

- Dan is an executive director with over 24 years of combined consulting and financial services industry experience advising asset management firms and fund sponsors on matters relating to operations and regulatory risk. He has extensive experience with enhancing the design, implementation and governance of core asset management processes, including assessing/enhancing operating models, risk oversight and regulatory compliance programs; designing and implementing periodic monitoring and forensic testing programs; assessing the impact of regulations; and developing response strategies and conducting due diligence of service providers, sub advisers and private funds.
- He assists asset managers and fund sponsors with enhancing the design, implementation and governance of regulatory compliance programs, risk monitoring/response activities and associated surveillance programs.
- ► He holds a Bachelor of Science degree in Rehabilitation from Springfield College, Springfield, MA, is a certified fraud examiner and is a member of the Association of Certified Fraud Examiners.



Belal Khalid Executive Director New York, NY +1 212 773 0827 belal.khalid@ey.com

- Belal is an executive director in the EY Performance Improvement practice. He has over 20 years of experience in capital markets, asset management, hedge funds and prime brokerages. His focus is large-scale transformations, system implementations, front-to-back controls, operations strategy, process improvement and regulatory compliance with Dodd-Frank, European Market Infrastructure Regulation and other rules, including swap execution facility.
- He developed operations long-term strategy for a large asset manager/institutional investor with \$900b AUM and helped in its execution. The operations strategy was in response to the business's plan to double the AUM. The strategy consisted of building scalability, break reduction, convergence to common platforms, improving client experience and location strategy for the operations department. Belal managed the execution of the two six-month phases of this strategy.
- ▶ He led the prime services front-to-back risk and controls review project for a large US bank. The project consisted of trade processing, operations, legal entity, security lending, books and records, client selection/onboarding, risk management, collateral and compliance streams. The work involved identifying gaps (e.g., controls, technology and operating model) and recommending next steps, including strategic and tactical projects.
- ► He managed Dodd-Frank implementation for a large asset manager and institutional investor. He performed the following as part of the project:
 - He worked with the legal and regulatory department of the client to understand the Dodd-Frank regulations and their implication for an asset manager and its clients
 - ▶ He led the technology and business assessment of all the impacted areas
 - ► He developed a road map for the implementation of all the required changes
 - ▶ He assisted the client in setting up governance structure for the management of this initiative
 - ▶ The program was fully implemented under his supervision at the client
- He has a Master's degree in Computer Science from the University of Michigan, Ann Arbor, and a Bachelor's degree in Electrical Engineering from the University of Engineering and Technology Lahore.

EY Proposed Core Engagement Team Leads



Ryan Burger Senior Manager New York, NY +1 212 773 7130 ryan.burger@ey.com

- Ryan has worked with a wide variety of financial institutions, including asset owners (pensions, insurance, banks and government agencies), multi-strategy asset managers/hedge funds, private equity firms and service providers (fund administration, middle office and prime services). Project types for these clients have included operational process reviews, operating model definition, business requirement documentation, business case development, vendor selections and software system implementations (partnership accounting, portfolio accounting, tax accounting and CRM).
- He has worked with institutions that invest or trade in a variety of asset types, including fixed income (e.g., corporate bonds, bank debt, asset and mortgage backed securities, interest rate swaps), long/short equity and private equity. Additionally, Ryan has experience with investor reporting and performance metrics.
- He is certified in Advent Geneva (Portfolio Accounting software suite that is typically used by multi-strategy asset managers) and has over three years' experience with SunGard Investran (Partnership Accounting software suite that is leveraged at private equity, real estate, institutional investors and fund of fund organizations).
- He recently worked with a top US public pension fund to analyze the current private equity accounting and reporting model and provide recommended options for a future state operating model. Areas of focus included data flow (investment book of record and accounting book of record), operations due diligence and fee re-calculations and accounting.
- He supported a pension administrator (middle office and custodian) to assist in the development of a unified middle office and custody services model for pensions and other institutional investors (alternative investments focus). He developed deliverables, supported project management responsibilities and provided industry expertise where necessary. His core responsibilities related to defining the operating model and conversion plan for its alternative investment offering (specifically for a UK-based pension). He managed day-to-day tasks required by the client team as well as ownership and updates to key deliverables.
- He recently worked with a 10b multi-strategy asset manager (investing in distressed credit, real estate, etc.) to conduct a series of assessments on the firm's treasury function, fund accounting function, management company accounting function, special purpose vehicle accounting function and general partner accounting function. The work effort included process flow documentation of end-to-end processes and findings and recommendations across people, process, technology and data.
- He recently conducted an operational risk assessment for a \$24bn multi-strategy asset manager primarily trading fixed income (MBS, bank debt, etc.) and derivative products. Core areas of focus were trade processing, operations, accounting, treasury and wire processing, pricing, bank debt processing, marketing, internal revenue, legal and compliance. He conducted deep-dive analysis and developed process documentation on the wire-processing function for this firm (across all types of wire movements).
- He assessed the efficiency and effectiveness of the investment operations processes at an \$8bn asset manager that primarily trades fixed income products (corporate bonds, bank debt, CDS). He generated recommendations to improve the current processes and technology environment to support future growth as well as compared the firm's capabilities against industry practices. He conducted a review of the operations manual and provided recommendations and templates to improve the manual usage.
- He conducted an assessment for a \$5b multi-strategy asset manager (trading fixed income, futures, etc.) to assess the readiness of the operational platform to adopt a new middle-office platform. He conducted analysis to review the current middle-office oversight model (of outsourced fund administrator) against industry practices. He collaborated with subject-matter advisors within Ernst & Young LLP's various practices to provide detailed insight to this organization currently in the process of adopting process, organization, and technology changes.
- He earned a Bachelor of Science in Accounting Information Systems (Development) with a minor in Global Business from Virginia Polytechnic and State University (Virginia Tech).

EY Proposed Core Engagement Team Leads



Douglas Montone Senior Manager New York, NY +1 212 773 7404 douglas.montone@ey.com

- Douglas is a New York City-based senior manager in the Performance Improvement, Operations Improvement Private Equity Advisory Services practice of Ernst & Young LLP. He has over 10 years of experience in consulting and financial services industries. Industry exposure includes private equity, fund of funds, real estate and asset managers.
- He assisted an asset manager with over \$24b in AUM with documenting its current state back-office and middle-office operations. In conjunction with documenting the procedures, systems, controls and owners, the team is also developing key themes across the organization to enable the next phase of current state analysis and develop a future state road map.
- He helped lead a large private equity client migrate its funds from a proprietary fund accounting system to the Investran suite. In addition he and the team worked alongside the client to define and document its new Investran production processes. Sample processes included capital calls, distributions, partner transfers, subsequent closes and quarter-end close.
- ► He recently assisted a large private equity fund administrator develop a future state road map. The future state road map is the conclusion of multiple findings and analysis sessions and deliverables, including target state workshops, gap analysis, target state operating model and solutions architecture.
- He recently helped a large asset manager with over \$20b in AUM with an end-to-end Form PF approach and implementation. The end-to-end implementation covers all fund types and sections of the new regulatory form. Key tasks included, but were not limited to, assistance with developing a Form PF data dictionary, documenting business requirements and meeting with client stakeholders to approve key decisions.
- Prior to joining Ernst & Young LLP, he worked at SunGard Alternative Assets as a senior consultant focusing on implementing Investran, a private equity accounting and portfolio management software suite.
- ▶ He has a Bachelor's degree in Finance from James Madison University.

EY Proposed Core Engagement Team Analyst



Patrick Mara Senior Boston, MA +1 617 375 2314 patrick.mara@ey.com

- Patrick is a senior in the Advisory Services practice of Ernst & Young LLP.
- He worked with a large asset management firm to conduct due diligence on three potential key vendors that would provide fiduciary services for a new program launch. He helped develop the approach, key areas of review and assessment, and conducted site visit meetings at the vendor site. He developed and completed the scoring summary and approach summary that was presented to senior management at the client.
- He assisted with two compliance attestations at a leading asset manager. He analyzed, updated, and tested the design and operational effectiveness of compliance controls in areas such as trade execution, trade allocation and material non-public information. He also developed and compiled findings and recommendations to the client to enhance controls and promote leading industry practices.
- ► He assisted a global asset management firm in the validation and testing of controls related to its investment services group. He met with process owners to identify controls and conducted testing to validate their operational effectiveness. Additionally, he helped provide observations and recommendations pertaining to the controls based on testing and industry leading practices.
- He lead internal audits for a global asset manager covering topics including the following: marketing, operational due diligence, vendor oversight, Form PF, Form 5500, trade errors, investment risk, contingency planning, derivatives pricing and valuation, 40 act compliance, gifts and entertainment, client guidelines, fee billing, performance reporting and SOX certification. Responsibilities included developing an understanding of the firm's process relating to the assessed topic; identifying and testing the key controls in the process; determining observations, recommendations and leading practices resulting from the assessment; and drafting a report.
- He assisted with the execution of risk assessments at a leading asset manager. He worked with the company's risk team to interview the subject-matter advisors on various topics that make up the daily processes of a financial services provider. Using the Governance Risk and Compliance system, he built bottom-up risk assessments and process flows that mapped out the activities of the firm in order to identify and mitigate areas of risk.
- Prior to joining Ernst & Young LLP, he worked in the Market Research and Fund Treasury departments of a global asset management firm in Boston, MA. He analyzed the firm's competitive positioning across US geographies and fund categories and presented recommendations for the allocation of sales resources by geographic and fund category segmentations.
- He graduated from Colby College with a BA in Economics Mathematics with a concentration in Financial Markets

Experience summaries

Engagement Partners						
Team member	Projects/client types	Vork performed	Roles and responsibilities			
Dan Bender	See relevant engagements 2, sexperience" section above	3, 4 and 10 in the "Capabilities and	 Responsible for engagement oversight and timely production of work products 			
Belal Khalid	See relevant engagements 13, experience" section above	 Participation in/facilitation of, key meetings/work shops Providing subject-matter advice 				
Core Team Le	ads and Analysts					
Team member	Projects/client types	Vork performed	Roles and responsibilities			
Ryan Burger	See relevant engagements 1, 8 experience" section above	8, 9 and 11 in the "Capabilities and	 Responsible for project planning, management, and deliverable review Responsible for first-level review of client deliverables, tracking status of open items, risks, communications 			
Douglas Montone	servicer See relevant engagement	Performed current state and future state assessments Conducted vendor selection assistance for ERP and Private Equity general ledger systems Led implementations of private equity and hedge fund accounting general ledger systems	planning and interview questionnaires Led working sessions with various clients Acted as the first point of contact for business users and stakeholders Developed gap analysis comparing asset managers current processes to leading practices Developed future state roadmaps for asset managers and asset servicers			
Patrick Mara	 Large asset management firm Global asset management firm 	potential key vendors that would provide fiduciary services for a new program launch.	 Helped develop the approach, key areas of review and assessment, and conducted site visit meetings at the vendor site Developed and completed the scoring summary and approach summary Responsibilities included developing an understanding of the firm's process relating to the assessed topic; identifying and testing the key controls in the process; determining observations, recommendations and leading practices resulting from the assessment 			

Section Specific Subject Matter Advisors						
#	Team member	Projects/client types	Work performed	Roles and responsibilities		
2.1	Brad Howard	 Multinational manufacturing Investment and retail banking Equity brokerage Mutual casualty insurance Utilities 	 Reviewed governance of US derisking strategy and revamp of DC governance structure Established DC governance structure and fiduciary training Reviewed DC vendor selection governance/search for and implementation of DC investment adviser and record-keeper Reviewed and revamped US DB and DC governance structures 	 EY's US pension risk practice lead Trusted advisor to clients' CFOs, CHROs, and Market Innovation, particularly with respect to human capital and related finance 		
2.2	Radhika Philip	 Public and private financial institutions Experience consulting Fortune 100 companies on organizational transformation and talent management 	 Advised clients on organizational design, talent management and HR function Collaborated with clients to create plans and solutions to resolve human capital issues Redesigned mortgage servicing division Designed global career path, structure, roles and performance metrics for organization 	 Created recommendations and proposed enhanced future state of HR function for organizations Led project management across multiple work streams 		
2.3	Willy Wolfe	Corporate, commercial, retail banking, insurance and wealth management clients	Prior leadership role chairing the Asset Liability Management Committee and directly managed a \$25 billion investment portfolio. He guided private equity investments as Vice Chair of a subsidiary, including pre-deal screening Assisted clients with Treasury organization and design, cash management, cash flow forecasting, foreign exchange risk management, Treasury governance and controls, bank relationship management, liquidity management, funding/securitization, Treasury technology and other Treasury activities	 Western Region leader of EY's Global Treasury Services practice Responsible for a \$3b pension plan and \$2.2b 401(k) plan administration for 6+ years as a member of a Benefits Committee and Investment Subcommittee 		
2.4	Andrew Reisman	Health insuranceUtilities	 Defined compliance program strategy and aligned with business strategy Designed, implemented and assessed program effectiveness for organizations Mapped the operating units and resources to the compliance requirements and corresponding controls for a company Assisted a client with determining processes for tracking new regulations Helped a client to obtain legal interpretations, implement new business processes and controls, and monitor program effectiveness 	 Led and managed teams in compliance risk and program assessments Facilitated sessions with management teams Provided subjectmatter advice Assessed the controls and identified gaps Responsible for firstlevel review of client deliverables, including findings and recommendations 		

Section Specific Subject Matter Advisors						
#	Team member	Projects/client types	Work performed	Roles and responsibilities		
2.5	David Parks	 Asset management Insurance Banking and brokerage industries 	 Led review of distribution fee implementation and operational readiness to monitor fee profitability levels Created operating model for the contractual negotiation of distribution fees and policies and procedures on related fee setting Performed operational and IT reviews at major insurance companies in support of mutual fund and transfer agent/plan sponsors Recently worked with several large organizations to establish new compliance operations to address SEC and FINRA rules 	Oversaw the team responsible for developing new job descriptions, committee structures w/ formal mandates, policies and procedures, formal risk tolerances and metrics used to enhance the effectiveness of governance related activities		
2.6	Mike Neubauer	Global and regional financial services institutions, including banks and an Ohiobased insurance provider	 Executed IT audits in support of the integrated audits Audits consisted of IT general controls reviews of highly complex IT processes for all financially significant applications as well as testing programmed application controls and across multiple platforms 	 Oversaw the team responsible for issuing the service organization controls report Coordinated consultation with subject-matter resources, as necessary, throughout the course of the engagement Reviewed all final workproducts Provided subject-matter advice throughout the course of the engagement 		

Ohio Relationship				
Team member	Projects/client types	Work performed	Roles and responsibilities	
Tammy Izzo	AutomotiveManufacturingEnergy	 Global Process Owner for Customer Relationship Management 	Responsible for relationship management and team oversight	
Scott Miller	► Large employers	 Business development for National Tax 		
Project Quality Ass	urance			
Team member	Projects/client types	Work performed	Roles and responsibilities	
Josef Pilger	See relevant engageme experience" section ab	ents 5, 6, and 7 in the "Capabilities and ove	 Responsible for risk management, delivery excellence and client 	
Debra Cammer Hines	► Public sector	Led public sector consultants under the Strategy and Transformation and the Business Analytics and Optimization service lines	 experience Served as a catalyst, mentor, advisor and ambassador throughout engagement 	
Pension Advisors				
Team member	Projects/client types	Work performed	Roles and responsibilities	
Adam Berk	See relevant engagem experience" section at	ent 16 in the "Capabilities and pove		
Sara Yamotahari	Canadian pension funds	 Advised clients on tax-related matters, including structuring, execution, tax policy and ongoing maintenance of investments 	 Provided industry insight into specific topics regarding pension and retirement funds, traditional funds, and alternative funds (hedge 	
lain Brown	Pension fundsUtilities companyTelecomsGovernment	Provided guidance on the use of financial instruments to enhance or manage the risk and return characteristics of pension schemes' investment strategies and bring an element of control to companies' balance sheets and net cash flow	funds, private equity funds, real estate funds, traditional assets)	
Rose Sullivan	 Asset Management Financial Services Public Pension Systems 	Conducted market analysis on areas asset managers are looking to outsource, competitors service capabilities and analyzed on how new regulations will impact the middle office landscape		
Asset Management				
Team member	Projects/client types	Work performed	Roles and responsibilities	
Lesley Keefe	 Top-tier investment advisors Mutual fund companies 	Assists asset management clients in the areas of technology enablement, investment operations assessments, system selections and implementations, compliance risk assessment and key risk indicator development, operating model strategies, organizational change management and program management	Provided industry insight into specific topics regarding pension and retirement funds, traditional funds, and alternative funds (hedge funds, private equity funds, real estate funds, traditional assets)	
Samer Ojjeh	and experience" section	ents 9, 11, 12 and 14 in the "Capabilities on above Management Advisory practice		

Management plan

Below is our plan for the EY engagement team, should ORSC select EY to perform the assessment. We will allocate responsibilities to team members as outlined below. Accordingly, we have provided estimated hours and billable rate per level of team member.

Team responsibilities detail						
Level	Responsibilities	Team member	Estimated Billable hours rate			
EY Ohio Relationship Partners	Responsible for relationship management and team oversight	➤ Tammy Izzo ➤ Scott Miller	No fees will be charged for their time			
EY Quality Assurance Partners	 Responsible for risk management, delivery excellence and client experience Serve as a catalyst, mentor, advisor and ambassador throughout engagement 	Josef PilgerDebra Cammer Hines	No fees will be charged for their time for quality assurance. May act as subject matter advisors (see costs below)			
Engagement Partner	 Responsible for project initiation, overall project oversight, planning and coordinating quality client service delivery, and confirming effective resource allocation Perform final review of high-impact deliverables Provide subject-matter advice throughout project Act as a point of escalation for ORSC management 	Dan BenderBelal Khalid	288 \$421.70			
Core Team Leads	 Responsible for project planning, management, deliverable review and quality control, and coordinating industry benchmark analysis (where applicable) Responsible for first-level review of client deliverables, tracking status of open items, risks, communications planning and interview questionnaires Provide industry insight throughout project Lead working sessions with various client leads, including board governance, organizational structure, investment policy, legal compliance, risk management and controls and IT operations Act as the first point of contact for business users and stakeholders Raise key risks to ORSC management 	Ryan BurgerDouglas Montone	992 \$394.20			
Core Team Analysts	 Responsible for day-to-day business analysis and facilitation of client deliverables, including interaction and data flow diagrams, current state assessment, road map of key considerations, cost/benefit summary, etc. Responsible for creating interview questionnaires, meeting minutes templates and written summaries of key client meetings Responsible for issue resolution and escalation when necessary 	 Patrick Mara Staff - (Team member to be identified on commenceme nt of project with approval from ORSC where applicable) 	1,280 \$205.15			

Team responsibilities detail						
Level	Responsibilities	Team member	Estimated hours	Billable rate		
Section Specific Subject- Matter Advisors	Provide industry insight into specific pension topics such as board governance procedures, board training/costs, compliance with statutes, communication policies, organizational structure and staffing, investment policy and oversight, investment and fiduciary risk, custodian policy, legal compliance, risk management controls and IT operations	 Willy Wolfe Brad Howard Radhika Phillip Andrew Reisman David Parks Mike Neubauer 				
Industry Subject- Matter Advisors	 Provide industry insight into specific topics regarding: Pension and retirement funds Traditional funds Alternative funds Hedge funds Private equity funds Real estate funds Traditional assets 	 Adam Berk Sara Yamotahari Iain Brown Rose Sullivan Samer Ojjeh Lesley Keefe 	168	\$407.95		

References

EY and the members of our identified project team have provided advice to our clients and successfully completed projects that address strategic issues similar to those faced by the ORSC. We believe the best way for you to measure our team and our capabilities is to talk to our existing clients. We value our relationships with our clients. The below clients have agreed to make themselves available as references and welcome the opportunity to connect with ORSC.

Project qualification	Project description	Reference contact information	
Global prime broker (Credit Suisse)	EY was engaged to assist for the target state operating model design of the client's Prime Brokerage business which was moving from one jurisdiction to another jurisdiction in Europe because of increased capital requirements. The engagement involved looking into the organization, processes and technology infrastructure involving trade execution to middle office and back office functions. The goal was to improve the operational efficiency, risk and controls during the move.	Kevin Ulrich, Prime Services Prime Product Development +1 212 325 0157 kevin.ulrich@credit-suisse.com	
Top-tier multi- strategy asset manager (Canyon Partners)	EY was engaged by the CFO of a leading multi- strategy asset manager to perform an operational risk assessment, covering the following functional areas: trade processing, operations, valuation and pricing, accounting, bank debt operations, treasury, investor relations, compliance, legal, tax, marketing, technology and data management.	John P. Plaga, Partner and Chief Financial Officer +1 310 272 1300 jplaga@CanyonPartners.com Justin Smith Treasurer jsmith@CanyonPartners.com	
Barclays separately managed account for top 10 in AUM US public pension	The client won a mandate to manage a \$500 million separately managed account for a large public pension fund. The client engaged EY to assist with the on-boarding of both the client and the client's service providers (e.g., fund administrator). EY worked with the client to develop an implementation plan around middle office functions, as well as reporting requirements, fund administration, day one readiness and future state design.	Brendan Albee Chief Operations Officer for Equities, Prime Services, and Asset Management Operations (Barclays) +1 952 715 5502 Balbee@varde.com Note: Brendan Albee was recently hired as the Chief Operating Officer of Värde Partners	

Methodology, work product and timeline

Overview of our approach

EY will approach the scope of the services in four phases

- (1) Project planning and mobilization
- (2) Current state process and assessment
- (3) Gap/Benchmark analysis
- (4) Future state analysis Recommendations and opportunity for improvement

Note: We have developed the approach based on our knowledge of ORSC and SERS and scope described in the RFP and the Q&A distributed. As with any client projects, we look forward to adjusting any portion of the approach based on feedback from SERS, should EY be chosen for this initiative.

EY will leverage its experience and knowledge of pension and institutional and asset management operations to support ORSC and SERS in this program. We have constructed an approach and team that has provided similar projects in the past within pension firms, asset management firms and institutional investors. The approach below is based on our current understanding of scope and we look forward to refining/adjusting with SERS if we are selected as the consultant for this project. On our projects, we strive to work in collaboration with our clients to have optimal success.

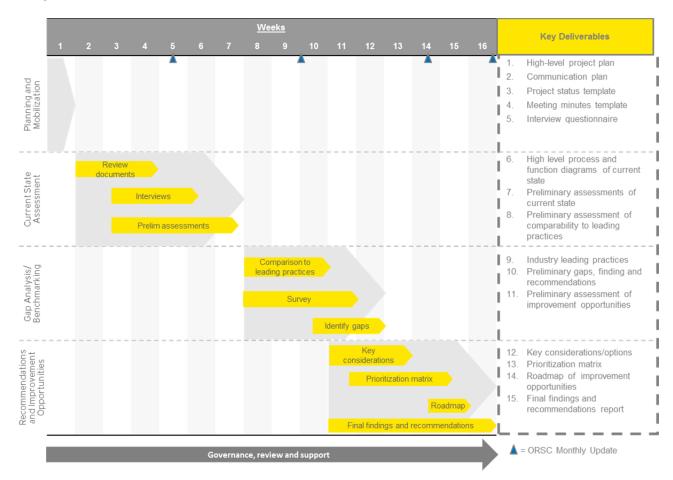
Guiding principles

Our approach has a number of principles to which we will adhere during our activities:

- ▶ Understand your objectives and focus on achieving your outcomes.
 - Our team has a long track record of delivering against our objectives, and in creating value through our work on pension assessments and operational change initiatives. We take great pride and care in driving innovative and creative approaches to maximizing value.
 - ▶ We believe that working in collaboration with clients yields optimal success.
- Select the best approach for implementation with you.
 - We are thoroughly committed as a team to working with you to find the best solutions to all issues, ensuring an effective and successful project.
 - ▶ We will confirm that these are grounded in leading practice based on our considerable experience in this industry and region in particular.
 - Our team has a proven track record with pension funds and asset management firms.
- Focus on participation.
 - A key element of our approach is to ensure capacity is transferred every day through our interactions. We will work with the team appointed by you on all aspects of this project, and ensure through working together that maximum value is transferred.

- Coordinate and communicate regularly.
 - ▶ We will design our project approach around regular meetings and update sessions to allow overall project progress to be smooth.
- Provide high-quality leadership.
 - Our project team will be clearly led, and will be 100% focused on producing the highest-quality advice and deliverables that we can.
- Be sensitive to confidential information.
 - We will provide the highest level of integrity when dealing with confidential information.

High-level timeline



Detailed work plan

1. Project planning and mobilization – (1 week)		
EY team	SERS team	
 2 Engagement Leads (50%) 2 Core Team Leads (80%) 1 Sr. Analyst (100%) 1 Staff Analyst (100%) (2-6) Subject Matter Advisors (10%) 	 Project Sponsor and Functional Team Leads (20%) Project Management/Coordination (75%) 	

Activities

1. Confirm goals and objective

- Conduct kick-off session with key stakeholders to understand high-level visions and any challenges
- Coordinate with ORSC's project sponsor to determine key stakeholders
- Develop master project plan and communications plan with key stakeholders

2. Review existing SERS materials (where available)

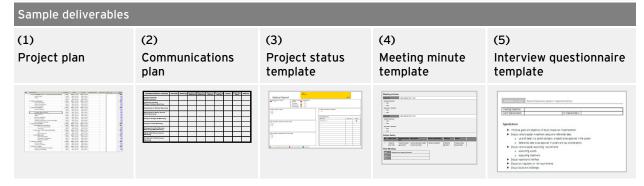
Leverage and review existing documentation (organization charts, process flows, checklists, board meeting minutes, succession plans, training documentation, policies and procedures, prior year assessments) if available to understand existing SERS processes and organization structure

3. Develop project management tools

- Draft meeting minutes template to document all key discussion points, action items, decisions finalized, sign-offs of deliverables and key next steps (leveraging EY or SERS standard templates)
- Create dashboard for project status to help confirm work products are delivered on time and on budget with specified quality (leveraging EY or SERS standard templates)
- Develop open items and risks tracker template (leveraging EY or SERS standard templates)

4. Plan for interviews/working sessions

- Collaborate with SERS project team to gain insight on sequencing of interviews (based on team availability and/or other factors)
- ▶ Schedule interview working sessions with identified SERS team members for RFP sections 2.1–2.6
- Develop interview questionnaires for each section (2.1-2.6) and submit to functional area teams in advance of workshops
- Prepare templates for information gathering and process mapping



2. Current state assessment - (6 weeks)

EY team	SERS team
 2 Engagement Leads (50%) 2 Core Team Leads (100%) 1 Sr. Analyst (100%) 1 Staff Analyst (100%) Subject-Matter Advisors (10% of 4 full time equivalents (FTEs)) 	 Project Sponsor (5%–10%) SERS Project Manager (50%) SERS Functional Team Members (10%–20%)

Activities

1. Conduct interviews/working sessions (functional areas and technology)

- Continue review of existing SERS documentation and materials
- Conduct targeted sessions to discuss end-to-end processes to gain an understanding of the current operating model, business processes and controls (key business needs, complexities, policies and procedures, vendor oversight/hand-offs, and peer and manager oversight and controls). Interviews will focus on the following criteria and be supported by SERS who oversees the following operations:
- 2.1 Board governance and administration
 - Review Board trustee education and training, including associated costs
 - Review documentation and understanding of the lines of reporting, spans of control and responsibility of overseeing staff
 - ► The statutes and administrative rules under which SERS operates along with compliance monitoring and challenges/shortcomings
 - Understand SERS budget process, including approvals, monitoring and adherence
 - Conflict of interest policies and monitoring
 - Review succession planning policies and progress
 - Review administrative costs
 - Communication policies and procedures
- 2.2 Organizational structure and staffing
 - Understand existing resource activities, allocation and capacity
 - Review existing job profiles, including responsibilities, accountabilities, required competencies and qualifications
 - Review current organizational structure/levels and reporting relationships
 - Understand current staffing procedures, including sources, criteria, decision roles and technology
 - Understand pay-out plans and reward allocation
 - Review current criteria/metrics and process to assess member satisfaction
 - Understand current technology and process used to monitor staff qualifications

2.3 - Investment policy

- Analyze and assess existing policy and procedures to identify key process vulnerability
- Review process of investment policy adoption
- Assess statement of investment policy and compare to industry leading practices
- Review process of selecting and overseeing investment managers
- Review custodian agreements and oversight procedures
- Understand investment objectives
- Understand determination of asset allocation
- Understand use of investment returns
- Understand fee review and negotiations process
- Understand compatibility with most recent asset/liability study and five-year experience review
- Current Ohio State Treasurer responsibilities

2. Current state assessment - (6 weeks)

- ▶ Review specific functions offer during Ohio State Treasurer custody assessments such as the following:
 - Portfolio performance and reporting
 - Fund accounting
 - Trade settlement
 - Compliance monitoring
 - Income collection
 - Valuations
 - Tax support
 - Cash management
 - Data management
 - Corporate action processing
 - Document safekeeping

2.4 - Legal compliance

- Review legal compliance policies and procedures, including monitoring and training with the following:
 - Legal (internal)
 - Legal (external)
 - Compliance
 - Human resources
- Understand and evaluate the adequacy of SER's procedures for obtaining legal advice to support its process for compliance with IRS regulations
- Understand the role of counsel in the compliance process, including (i) monitoring of new IRS regulations, IRS guidance and interpretations of regulations, court and agency decisions, and agency enforcement trends; (ii) legal advice about regulations and the adequacy of SERS compliance processes; (iii) advice and representation of the client in audits and regulatory proceedings and litigation; (iv) and assistance with internal investigations
- Understand management's perceptions of the adequacy of legal resources, including responsiveness, quality of advice and cost of services

2.5 - Risk management and controls

- Gain understanding of financial controls, integrity of financial statements, purchasing policy, accounting process controls, reporting, audit procedures and record-keeping. Key stakeholders include members from the following functions:
 - Risk management
 - Finance
 - Investment accounting
 - Investment operations
 - Internal audit
 - Compliance
 - Human resources
 - Information technology
 - External service providers
- Identify process, technology and people pain points and key risks across the functional areas focusing on the following components of the internal control structure
 - Segregation of duties/staffing
 - Availability of information
 - Timeliness
 - Accessibility and accuracy of information
 - Policy manuals and documentation
 - Supervision and review
 - Audits
 - Training

2. Current state assessment - (6 weeks)

2.6 - IT operations

- Understand IT general control processes, including the following:
 - System development life cycle/change management
 - Information security, including identity and access management and general security settings
 - IT operations (e.g., system backups, automated job scheduling, IT problem management)
- Understand current policies regarding cybersecurity processes such as the following:
 - Privileged account access
 - Security monitoring/incident management program
 - Security awareness program
 - Threat and vulnerability management program
 - Patch management program
 - Vendor risk management program
 - Data classification program
- Understand current data governance/management policies and procedures
- Understand business continuity/disaster recovery policies and procedures
- Understand IT project management policies and procedures

2. Document business and technology processes (based on interviews/working sessions)

- Document process summaries/meeting notes, high-level diagrams, including controls and application usage for each process (work product 6)
- Develop overall technology architecture diagram, integration map and glossary based on interviews/working sessions conducted with functional groups and with technology team members. Within architecture diagram, highlight potential areas for improvement or automation (e.g., red, amber, green markings)
- 3. Document high-level current state issues summary and preliminary findings based on working sessions (work products 7-9)
 - Inventory and categorize (by themes and impact) areas with improvement opportunities/gaps/issues/ pain points discussed
 - Document initial assessment of similarities and differences and preliminary assessment of operational policies and procedures

4. Conduct initial industry insight sessions

Based on initial observations, conduct education sessions to discuss various leading industry practices for similarly situated public retirement systems or other identified peer group members

Sample deliverables				
(6) High level diagrams (processes, functions, systems, data input/outputs)	(7) Preliminary assessment of current state processes (incl. challenges list)	(8) Preliminary assessment of comparability to leading practices	(9) Preliminary assessment of improvement opportunities	
The second secon		Assessment of Similarities and Differences State 1	The state of the	

3. Gap analysis and benchmarking – (5 weeks)

EY team

- > 2 Engagement Leads (50%)
- 2 Core Team Leads (100%)
- 1 Sr. Analyst (100%)
- ▶ 1 Staff Analyst (100%)
- Subject-Matter Advisors (10% of 4 FTEs)

SERS team

- Project Sponsor (5%–10%)
- SERS Project Manager (25%)
- ▶ SERS Functional Team Leads (5%–10%)

Activities

1. Conduct benchmark analysis against leading practices

- ▶ Develop listing of key criteria where industry insight would be most applicable (i.e., potential areas of SERS weakness, high risk areas, or areas of particular interest to ORSC or SERS)
- Create questionnaire to collect feedback from EY Subject Matter Advisors and industry peers (leveraging EY templates used in prior engagements for public pension projects)
- Gather data internally by distributing questionnaire and conducting working sessions with EY subjectmatter advisors
- ▶ Gather data externally through questionnaires (potentially anonymously to be sensitive to SERS)
- Analyze data to produce themes and develop viewpoint of strengths, weaknesses, and differences of SERS vs. industry leading practices (work product 10).

2. Perform a high-level gap assessment

- Identify policy, process, risk or technology gaps by comparing current state to leading practices
- Conduct sessions with EY subject-matter advisors and with SERS to outline how identified improvement opportunities may be implemented
- Facilitate work sessions with process owners to review, vet and evaluate the high-level gap analyses
- Create preliminary recommendations based on peer analysis and gap assessment (work product 11)
- Review deliverables with ORSC and with SERS to receive feedback, comments and understand any areas where additional information is required

Sample deliverables

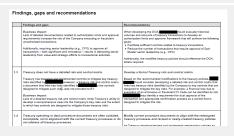
(10)

Industry leading practices across all scope sections

(11)

Draft report of preliminary findings, gaps and recommendations





4. Recommendations and improvement opportunities – (6 weeks)

SERS team EY team

- 2 Engagement Leads (50%)
- 2 Core Team Leads (80%)
- 1 Sr. Analyst (100%)
- 1 Staff Analyst (100%)
- ► (2-6) Subject Matter Advisors (10%)

- Project Sponsor (5%–10%)
- SERS Project Manager (50%) SERS Functional Team Leads (20%)

Activities

1. Develop listing of key considerations/recommendations and prioritized roadmap

- Develop strategic long-term improvement plans/recommendations (deliverable 12) to address gaps identified in the current state along with a best-in-class operating model to support recommended changes to achieve leading industry standards. Develop multiple future state options, Example areas of focus include the following:
 - Board governance and administration suggestions (including suggested roles and responsibilities where risks or gaps exist, policy and guideline recommendations, recommended protocol and process to identify new risks and remediate risks identified during the assessment)
 - Investment guidelines and risk management protocols as well as legal and regulatory risks of noncompliance based on new policies
 - Organization structure and compensation suggestions
 - Operational improvements (i.e., reduced redundancies and/or improved controls, 3rd party vendor usage and/or internal process and responsibility improvements and/or changes)
 - Lifecycle of investment processing improvement opportunities (including trade processing and compliance, settlement, corporate actions and proxy, cash movement (for over the counter assets), investment accounting, financial reporting, management reporting, interfaces to general ledger and touch points with external fund managers
 - Technology improvements (i.e., software enhancements and impacts of using systems)
- Determine level of effort and impact (e.g., based on severity of issue/gap/improvement opportunity) of each long-term and short-term improvement opportunity to create a prioritization matrix (in collaboration with ORSC and SERS to prioritize appropriately) (deliverable 13)
 - Conduct workshops with key stakeholders to understand priorities, feasibility and time estimates to implement (in addition to providing subject-matter knowledge based on prior experience)
- Develop road map for implementation of short-term and long-term improvement opportunities based on prioritization matrix (i.e., effort/timing and level of impact) (deliverable 14)

2. Produce and present executive summary of observations and recommendations

- Produce executive summary of project and compile work products for final findings and recommendations report (deliverable 15)
- Conduct final vetting sessions of deliverables and executive summary with functional area team members and/or project sponsor(s)
- Apply updates to deliverables (based on feedback from functional area team members and/or project sponsor(s)
- Present final findings and improvement opportunities report

Sample deliverables (12)(13)(14)(15)Key considerations/ Prioritization matrix Final findings and Road map of options improvement recommendations opportunities report g | Proceed before mendeling in delayarized | * Name or desprise content which is introduced in content of the process of the content of the process of the content of the

Additional information A: What EY will deliver

EY proposes to perform the following activities covering the areas identified in your RFP in accordance with AICPA consulting standards:

- 1. Current state assessment
- 2. Gap analysis compared to leading practices/benchmarking analysis
- 3. Recommendations for improvements

Under these standards, we will produce a report describing our findings, recommendations for improvement and a suggested prioritization of those improvements. These services would be advisory in nature. EY will not render an assurance report or opinion, nor will the services constitute an audit, review, examination or other form of attestation as those terms are defined by the AICPA. Under the AICPA consulting standards, EY work products are solely for the internal use and benefit of the ORSC and are neither intended for use by, nor for the reliance of any other party.

However, ORSC may use the results of our work to perform its own analysis and develop a report in which it draws conclusions regarding areas of strength and weakness of SERS. ORSC would be responsible for the analysis conducted and can distribute an ORSC report publically with reference to receiving assistance from a third-party consulting firm.

Alternative approaches

As we have developed our response and considered the scope of your RFP, our firm leadership has devoted a significant amount of time contemplating methods under which we could meet ORSC requirements for conclusions regarding the performance of SERS, and the distribution of the outcome of the findings and recommendations report outside of ORSC.

Two approaches that may achieve those requirements have been identified, but would require additional consideration from ORSC and SERS before they could be formally proposed by EY. These approaches are available if our work were performed under AICPA attestation standards. These alternative approaches are:

Agreed-upon-procedures (AUP). Under an AUP approach, ORSC would specify the procedures to be used to
perform the review. These procedures could be developed in consultation with EY so that they specifically
meet ORSC objectives. ORSC would ultimately be required to assume responsibility for the sufficiency of the
procedures. EY would then perform the procedures and produce a descriptive findings report. Such report
could be shared with SERS if it also agreed to the sufficiency of the procedure. If ORSC would like to share
the EY AUP report with others, a third-party access and consent letter provided by EY would need to be
administered. The access letter requires the third party to acknowledge the intended purpose, use and
agreement with the limitations of the report, as well agreeing as to the sufficiency of the procedures. A
separate recommendations report would be written as well, with prioritized recommendations to address
any findings, but that report would be only for ORSC internal use.

2. Custom-criteria attestation. Under this form of attestation engagement, SERS management would need to make a series of written assertions that could then be tested by EY using specific and measurable criteria. Such assertions might relate to board governance and administration, organization structure and staffing, investment policy and oversight, legal compliance, risk management and controls, IT operations and other characteristics. These services would constitute an assurance report or opinion on the models based on the custom attestation criteria that could be publicly released if it is determined that the criteria, and underlying procedures, are likely to be understood. Otherwise, the report could be made restricted to certain classes of users (e.g., other Ohio governmental entities) who would be able to understand the criteria and procedures. In addition to the attestation report, we could provide a letter identifying any findings and recommendations and prioritizing them for SERS management's consideration. Such a findings and recommendations letter could not be publicly released.

The table below summarizes the key similarities and differences between our proposed approach and the alternative approaches. If you find one of these alternative approaches to be worth pursuing with EY, we would welcome further discussion with the ORSC and SERS on the scope of the current RFP, basis for the services, report format and publication, and modifications of our technical and price proposals.

Engagement type	Findings and recommendations	Agreed-upon procedures	Custom criteria attestation
AIPCA standards	Consulting standards	Attestation standards	Attestation standards
What EY will do	Analyze documentation, assumptions, model mechanics, and conduct detailed interview and review sessions with SERS as well as validate understanding with SERS	Execute the agreed procedures and present findings report based on the results of those procedures	Assess operational areas against defined criteria
What ORSC will receive	Findings and recommendations report without conclusions	AUP report identifying the procedures and findings without assurance or opinion Findings and recommendations report without conclusions	Attestation report opining on whether management's assertions about the models are fairly stated in all material respects Findings and recommendations report without conclusions, if requested
Publication of EY's report restricted?	Yes – prohibited	Use could be extended to parties which agree to the sufficiency of the procedures.	Attestation report – no restrictions Findings and recommendations report – prohibited
What ORSC needs to do	Agree on the scope of our work	Define procedures in consultation with EY	Develop suitable (e.g., measurable) criteria to test the SERS assertions
What SERS needs to do	Sign a third-party access letter to receive the EY report	Sign an access and representation letter to receive the EY report	Sign management assertion that SERS complies with the criteria Sign a management representation letter

Additional information B: Peer review

EY participates in the AICPA peer review program that requires a triennial review of our system of quality control for our audit practice. The purpose of the AICPA peer review program is to serve as a bridge between the PCAOB's inspection program and the firm's state licensing and other federal regulatory practice monitoring requirements.

KPMG completed the most recent peer review of Ernst & Young LLP's audit practice for the year ended 30 June 2013, and issued its opinion dated 6 December 2013. The peer review results confirm that our firm's system of quality control meets the requirements of the quality control standards for an accounting and auditing practice established by the AICPA and is being complied with, providing the firm with reasonable assurance of compliance with applicable professional standards.



System Review Report

To the Partners of Ernst & Young LLP and the National Peer Review Committee of the AICPA Peer Review Board:

We have reviewed the system of quality control for the accounting and auditing practice of Ernst & Young LLP (the firm) applicable to non-SEC issuers, in effect for the year ended June 30, 2013. Our peer review was conducted in accordance with the Standards for Performing and Reporting on Peer Reviews established by the Peer Review Board of the American Institute of Certified Public Accountants. As a part of our peer review, we considered reviews by regulatory entities, if applicable, in determining the nature and extent of our procedures. The firm is responsible for designing a system of quality control and complying with it to provide the firm with reasonable assurance of performing and reporting in conformity with applicable professional standards in all material respects. Our responsibility is to express an opinion on the design of the system of quality control and the firm's compliance therewith based on our review. The nature, objectives, scope, limitations of, and the procedures performed in a System Review are described in the standards at www.aicpa.org/prsurnmary.

As required by the standards, engagements selected for review included engagements performed under Government Auditing Standards, audits of employee benefit plans, audits performed under FDICIA, audits of carrying broker-dealers, and examinations of service organizations [Service Organizations Control (SOC) I and 2 engagements].

In our opinion, the system of quality control for the accounting and auditing practice of Ernst & Young LLP, applicable to non-SEC issuers, in effect for the year ended June 30, 2013, has been suitably designed and complied with to provide the firm with reasonable assurance of performing and reporting in conformity with applicable professional standards in all material respects. Firms can receive a rating of pars, pars with deficiency(ies) or fail. Ernst & Young LLP has received a peer review rating of pars.



December 6, 2013

Additional information C: Resumes of Subject Matter Advisors

EY Core Engagement Team Section Specific Subject Matter Advisors



Brad Howard Senior Manager Cleveland, OH +1 216 583 1839 brad.howard1@ey.com

- Brad leads Ernst & Young LLP's Pension Risk practice in the US. He has over 15 years of experience consulting with retirement plan sponsors and insurance providers. He advises clients' CFOs, CHROs, and Market Innovation functions regarding an array of human capital and related finance matters. He is a recognized thought leader in benefit and pension risk management. He was a contributor for an extensive study of big data implications for the Grocer and Manufactures Association and the primary author of study on the pension risk transfer market commissioned by the Society of Actuaries.
- ► He has developed extensive experience in evaluating and implementing risk management and governance programs, including addressing issues associated with fiduciary, contractual, actuarial, legal, financial and accounting considerations.
- Prior to joining Ernst & Young LLP, he led Deloitte's Pension Risk Transfer Advisory Services in the US and also spent time with a leading actuarial consulting firm.
- Brad is a Fellow of the Society of Actuaries, a Fellow of the Conference of Consulting Actuaries, an Enrolled Actuary under the Employee Retirement Income Security Act, and a member of the American Academy of Actuaries. These are the terminal designations from the major actuarial governing bodies.



Radhika Philip Executive Director, People Advisory Services

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- Radhika is an executive director in Ernst & Young LLP's People Advisory practice (PAS). She co-leads PAS Financial Services offerings in organizational design, talent management and HR function. She also owns leader planning for PAS nationally. She has over 20 years of experience advising public and private sector clients on human capital issues.
- She has designed for a leading financial services organization, global career paths, structure, and roles to drive deeper and broader client relationships and enable a paradigm shift in market functions. Radhika has recommended accountabilities, performance measures, and required competencies to drive selection and performance management. She has identified change impacts and developed change management plans.
- She redesigned the Mortgage Servicing Division for a leading US financial services firm. She proposed enhanced roles, process flow, and career paths to optimize service delivery and create growth opportunities for retention.
- She led redesign of corporate functions to enable geographical consolidation and drive efficiencies. She built business a case based on labor market analytics, real estate costs and qualitative drivers such as management, communication and job growth. She created plans to realize benefits.



Willy Wolfe
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- Willy is the Western Region leader of EY's Global Treasury Services practice. He has worked with a wide range of global financial services clients in all areas of Treasury, risk and business process improvement.
- Willy is responsible for providing a broad range of Treasury and risk management services to the firm's financial services and corporate clients. These services include Treasury organization and design, cash management, cash flow forecasting, foreign exchange risk management, Treasury governance and controls, bank relationship management, liquidity management, funding/securitization, Treasury technology and other Treasury activities.
- Prior to EY at Union Bank, Willy served as a member of Benefits Committee and Investment Sub-Committee, which were responsible for a \$3 billion pension plan and \$2.2 billion 401(k) plan administration. The committee asset allocation targets regularly exceeded plan benchmarks. Willy helped develop an LDI glide-path for pension de-risking after analyzing returns under multiple macroeconomic and actuarial scenarios. He reviewed and recommended, annually, policy and procedures for the Investment Committee with Benefits and Board. He supported third-party due diligence and manager performance ratings under ERISA's fiduciary standards. In addition, Willy chaired the Asset Liability Management Committee and directly managed a \$25 billion investment portfolio with support of 22 internal professional staff. He guided private equity investments as Vice Chair of a subsidiary, including pre-deal screening.
- Also prior to joining Ernst & Young, he led Treasury at the US subsidiary (\$100b+ in assets providing a wide spectrum of corporate, commercial, retail banking and wealth management solutions) of the largest bank in Japan. He was responsible for interest rate risk management, enterprise-wide risk management, investment management, policy and control procedures, selection and implementation of treasury and risk management systems, cash and bank relationship management, treasury centralization programs, cash flow forecasting, liquidity and funding, collateral management, governance, capital structure and treasury operation concerns.
- His previous experience includes CFO and Treasurer roles at high-tech companies such as NeXT Computer, Kana Software, Granite Financial and IBM. He also has substantial experience in the financial technology space having set up finance functions at ING DIRECT and Ally Financial.



Andrew Reisman Senior Manager Boston, MA +1 617 585 0302 andrew.reisman@ey.com

- Andy is a leader of the Fraud Investigation and Dispute Services Business Integrity and Corporate Compliance practice, helping clients to align business and compliance strategy, and to manage corruption, fraud, government contracts, antitrust and regulatory risks. He leads compliance risk and program assessments for companies in numerous industries. He helps to design and implement compliance and ethics program charters and frameworks.
- ► He has served as chief compliance officer of a global services company, as general counsel of a global business of one the world's leading companies and as an antitrust and tender-offer litigator at a major US law firm.
- ▶ His client engagements include the following experience:
 - Compliance and ethics program strategy: Assisted companies in several industries to define compliance program strategy and organizational structure, in each case addressing the needs of a decentralized business.
 - Compliance and ethics program assessment and implementation: Assisted global companies to design, implement and assess program effectiveness in highly decentralized organizations.
 - Compliance risk assessments: Assisted companies to assess their compliance risks and redesign their compliance risk assessment processes.
 - Ethics program development: Assisted a new company to define its core values through a facilitated session of the extended management team; assisted companies to draft and communicate their codes of conduct.
 - Incident response and investigations process: Assisted global companies to revise their process for intake, escalation, investigation and resolution of compliance issues; revised discipline procedures; assisted with assessments of confidential reporting lines.
- He is a member of the New York Bar, and holds a BS in Industrial & Labor Relations from Cornell University and a JD from New York University, where he was Articles Editor of the Journal of International Law & Politics.



Dave Parks
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- Dave has over 25 years of experience working within the asset management, insurance banking and brokerage industries, including related service providers.
- ► He has worked with over 20 transfer agents helping to establish internal controls, performing SAS 70 reporting and assessing compliance risks.
- He recently led a review of distribution fee implementation and operational readiness to monitor fee profitability levels.
- ► He has led engagements to create an operating model for the contractual negotiation of distribution fees and policies and procedures on related fee setting.
- ► He has performed numerous operational and IT reviews at major insurance companies in support of mutual fund and transfer agent/plan sponsors.
- He has recently worked with several large organizations to establish new compliance operations to address SEC and Financial Industry Regulatory Authority (FINRA) rules. These projects included a facilitated risk assessment of all major mutual-fund-related processes to identify the design and effectiveness of controls.
- He led an engagement to assist an asset manager to establish policies and procedures related to selling agreements and third-party distribution.
- ► He has led several engagements at large- and medium-sized organizations that focused on improving organizational and operational effectiveness.
- Prior to joining Ernst & Young LLP, he worked at State Street Corporation where he held various positions such as fund accountant, risk and controls specialist, and as a Global Risk and Compliance Officer
- Since becoming an industry consultant, he has worked on many industry projects related to portfolio management, distribution, transfer agent and participant record-keeping, operational risks assessments, IT effectiveness, regulatory compliance and internal controls.
- David's clients include investment advisors, 401(k) and 403(b) administrators, transfer agents, insurance companies, banks and broker dealers.



Mike Neubauer Executive Director Pittsburgh, PA +1 412 644 0463 mike.neubauer@ey.com

- Mike is an executive director in Ernst & Young LLP's Financial Services Organization Advisory practice. He has over 16 years of experience in information technology auditing and security and risk management. He has extensive experience identifying risk, designing and testing information systems controls for integrated audits of financial statements and internal control over financial reporting, as well as, auditing various aspects of information technologies, including information-processing risks associated with business processes and information system controls regarding the accuracy, completeness, and integrity of data and transaction processing for clients in the banking and capital markets, insurance, and asset management industries.
- He coordinated the execution of IT audits in support of the integrated audits for Fortune 500 financial services institutions. Mike's audits consisted of IT general controls reviews of highly complex IT processes for all financially significant applications as well as testing programmed application controls across multiple platforms.
- He performed and led an IT risk assessment for the Internal Audit department of a bank with over \$120b in assets, which included a connection to the enterprise's IT risk management efforts. This included developing the appropriate IT audit components and the associated audit strategy, scope and coverage for a three-year plan built to satisfy internal audit requirements and the bank's federal regulator.
- ► He managed the issuance of reports on a service organization's controls (SOC 1, SOC 2 and SOC 3) in accordance with the AICPA attestation standards (AT 801 and AT 101), formerly known as SAS 70, and other attestation services for several third-party service organizations within the financial services sector.
- As part of a co-sourcing arrangement, he performed over 50 internal-audit-related general, application, and infrastructure control reviews for a banking institution with consolidated assets in excess of \$300b.
- Mike earned a BA in Accounting and Financial Information Systems from the University of Pittsburgh.

Industry Subject Matter Advisors Pension team



Adam Berk
Principal
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- Adam Berk has 20 years of experience in HR and retirement consulting, including helping companies effectively manage enterprise pension risk, creating market competitive retirement plans, developing phased retirement/workforce planning strategies and advising companies on retirement and broader HR issues in connection with transactions. He has served clients across multiple industries, including energy, entertainment, chemical, financial, defense contracting, governmental, technology and transportation industries.
- In addition to serving clients, he serves as the E&Y Americas Retirement Service Leader. In this role he oversees E&Y retirement, benefit and actuarial services in the US and Canada
- He completed numerous financial management studies for a variety of private and public pension funds with assets ranging from \$90 million to \$45 billion. Recent studies include developing asset allocation policies, developing hedging strategies, analyzing alternative plan designs and developing funding policies.
- He provides strategy and actuarial consulting to clients regarding reward design, rate payer reimbursement, workforce management, and overall retirement financial management, including investment, benefit, accounting, funding and regulatory policy.
- He earned a Bachelor of Arts degree with honors in Mathematics from the University of Texas. He is an Associate of the Society of Actuaries (ASA), and Enrolled Actuary (EA), a Chartered Financial Analyst (CFA), a Member of the American Academy of Actuaries (MAAA), and a member of the Association of Investment Management and Research (AIMR).



Sara Yamotahari
Partner

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- Sara recently joined EY as America's International Tax Sovereign and Pension Funds Leader. She works closely with tax, transaction and advisory teams across all markets in the Americas as well as globally to provide EY's integrated global service offering with a key focus on the institutional investor market and its specific needs.
- Prior to joining EY, she performed multiple roles at one of the largest Canadian pension funds, as Head of Tax as well as senior managing director for a strategic investment as both an equity investor and qualifying operator. She was also a member of the enterprise risk committee and the investment risk committee as well as an observer on the investment committee of the board.
- She has also been actively involved in establishing relationships with tax policymakers and the Organization for Economic Cooperation and Development to advance the views of institutional investors, including pension and sovereign wealth funds to support favorable positions that would provide certainty of outcome on tax-related matters.
- Prior to joining EY, she was also independent trustee and chair of the audit and governance committee for a public listed Real Estate Investment Trust in Canada.
- She also spent time as Real Estate and Infrastructure Transaction Tax partner and the head of Mergers and Acquisitions tax for Canada for one of the large global accounting firms. Sara advised and assisted on successfully implementing many transactions for a number of pension funds and sovereign wealth funds with a personal focus on real estate and infrastructure across North and South America, Europe, Asia and the Middle East.

Industry Subject Matter Advisors Pension team



lain Brown Partner London, England +44 20 795 17546

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- lain has extensive experience in advising on pension scheme investment strategy, risk management, cost control measures and leading practice governance of investment functions, including for decision-making processes and fund manager selection and monitoring.
- ► He has provided guidance on the use of financial instruments to enhance or manage the risk and return characteristics of pension schemes' investment strategies and bring an element of control to companies' balance sheets and net cash flow.
- ► He has worked with clients to introduce funding and investment strategies that meet their objectives with regard to current and future solvency levels.
- ► He has also advised on asset liability management techniques to devise funding and investment strategies, both for pension schemes and for nuclear decommissioning sinking funds.
- Prior to joining EY, he was UK Head of Financial Risk Consulting at a major international employee benefit consultancy where he was responsible for the development of the actuarial and investment consulting businesses.
- Telecoms (£40bn scheme) review of the trustees' asset liability modeling function and their approach to setting the scheme's strategic target allocation.
- ▶ Utilities company (£8bn scheme) review of the governance framework of the scheme's investment department.
- Middle Eastern Government (£8bn scheme) review of the robustness of the investment department's governance framework regarding setting target allocations, decision-making to deviate over short terms, manager monitoring and selection procedures.
- Irish financial services company assessment of the governance structure and procedures within its liability-driven investment advisory team.
- Multinational conglomerate (150 pension schemes worldwide) review of the processes, systems and reporting criteria adopted by the in-house actuarial department for group reporting purposes in the corporate accounts.

Industry Subject Matter Advisors Pension team



Rosemarie Sullivan Senior Manager New York, NY +1 212 773 1292 rosemarie.sullivan@ey.com

- Error! Unknown document property name. is a Error! Unknown document property name. in the Advisory Services practice of Ernst & Young LLP. She has over 12 years of experience in the financial services industry serving asset management clients.
- Prior to joining Ernst & Young, Rose was the acting chief operation officer and the head of Americas operations and global client & service management for Funds and Advisory-Americas, an asset manager within Barclays supporting US public pensions. Her responsibilities included partnering with Legal and Compliance to ensure adherence to client and regulatory guidelines, e.g., Investment Company Act, Dodd Frank, FATCA, developing strategic plan to optimize Middle Office resource allocation to align the group with the Bank's location strategy, and creating operating models to support multiple investment vehicles.
- At a global asset manager she assisted in on-boarding a \$500 million separately managed account for a top 10 US public pension (in terms of AUM). She coordinated the development of implementation plan around middle office functions, reporting requirements, fund administration and day one readiness. She worked with key stakeholders in front office, compliance, risk, middle office, client reporting and technology to facilitate on-boarding of both the fund administrator and client.
- At a top 10 fund administrator, she assisted with the development of a global middle-office go-to-market strategy. Working on a multi-national EY team, she identified gaps in the client's middle office definition document, conducted market analysis on areas asset manager are looking to outsource, competitors service capabilities and analyzed on how new regulations will impact the middle office landscape.
- She worked with transactions advisory team to conduct due diligence on a prominent credit fund for a preeminent private equity firm. She evaluated operational risks and scalability of the target firm. She assessed the procedures/processes and controls within the middle office, back-office and valuation team. The team developed recommendations for enhancing the target's operating model and integration into the private equity firm.
- To increase scalability and controls, she assisted with the rationalization of fund administrators and formulation operating model efficiencies for private equity and hedge fund of funds on \$30B private banking platform.
- She managed the integration of the predecessor's hedge fund group into a market leading asset management firm. She developed future state operating and resource models, conducted due diligence, and provided project management support.
- She earned a Bachelor's in Economics and Business from Lafayette College and an MBA with specialization in Finance and Financial Instruments & Markets from New York University, Stern School of Business.

Industry Subject Matter Advisors Asset management team



Lesley Keefe
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- Lesley is an executive director in Ernst & Young LLP's Wealth and Asset Management (WAM) Advisory practice. She leads WAM's traditional asset management practice focusing on top-tier investment advisors and mutual fund companies. She has more than 20 years of experience in the financial services industry serving asset management clients in the areas of technology enablement, investment operations assessments, system selections and implementations, compliance risk assessment and key risk indicator development, operating model strategies, organizational change management and program management.
- She assisted a top-tier US wealth management firm in defining a share class structure that is responsive to current distribution and regulatory trends. The objective of the assessment was to provide a set of independent recommendations on how to structure the firm's mutual fund share classes in light of the firm's newly defined distribution strategy.
- She assisted a top-tier mutual fund company in the multiyear implementation of a new fund accounting and investment accounting platform for both the retail and institutional products. The program included recommendations on program governance, managing the stakeholder reporting, and coordination of multiple workstreams, ranging from the data warehouse, system implementation, risk, compliance, transition management, and policies and procedures teams.
- She assisted a number of leading insurance firms in the assessment and recommendations related to their current and future state operating models for the investment management function, working with a number of CIO, CCOs and CFOs with operating model strategies and plans. The analysis included application architectures, resource skills and organizational models, data management, risk management and oversight, and third-party oversight programs and governance models.
- She led the equity portfolio management and trading workstream for the due diligence assessment of a leading Exchanged Traded Funds (ETF) provider. Lesley worked with the head of portfolio management and head of trading to assess current key business processes, develop the target state operating model and technology requirements, and create both the detailed project plan to manage the organization to the change-of-control date, as well as detail the full carve-out transition plan.
- ▶ She earned a BS in Finance from Boston University, School of Management and an MBA in International Management from Thunderbird School of Global Management.

Industry Subject Matter Advisors Asset management team



Samer Ojjeh Partner New York, NY +1 212 773 6486 samer.ojjeh@ey.com

- Samer is a partner in Ernst & Young LLP's Asset Management Advisory Services practice based in the New York Financial Services Office. He leads the firm's advisory initiatives in the asset management marketplace, with more than 18 years of experience in the field of business advisory. He has helped numerous institutional asset managers, private equity funds, hedge funds, and asset services and prime brokers in improving and/or expanding the efficacy and effectiveness of their front-, middle- and back-office functions, redesigning operational processes to support changes in organizational structures, and their processes and technology platforms.
- His experience includes advisory services relating to organizational refinement for private equity and hedge funds. He is an experienced advisor for trade/deal capture portfolio management, portfolio accounting and partnership accounting systems implementation, middle-office formation and software vendor selection, as well as the infrastructure buildup related to the insourcing or outsourcing of middle- and back-office functions.
- He earned a BS in Business Administration with a double major in Management Science and Accounting from the University of South Carolina and an MBA from Pace University.

Glossary

The table below provides a glossary of all abbreviations, acronyms and technical terms used to describe the proposed services.

Glossary	
Term	Definition
AICPA	American Institute of Certified Public Accountants
AUP	Agreed Upon Procedures
CORE	CORE is a collection of method building blocks that provide a suite of tools and enablers for EY Advisory practitioners to deliver a standardized and improved approach for executing projects and realizing benefits.
DB/DC	Defined Benefit/Defined Contribution
FX	Foreign Exchange
GPS	Government and Public Sector
P2F2	Public Pension Financial Forum
PCAOB	Public Company Accounting Oversight Board
QAE	Quality Assurance Executive
SIFMA	Securities Industry and Financial Markets Association

Cost information

Our guiding principles for advisory pricing have been shaped by our key stakeholders – our clients, our people, the regulators and the market. Recognizing that advisory pricing for each of our clients may be different based on their unique facts and circumstances, we have not developed a set of rules or policies but rather guiding principles to help us meet our stakeholders' objectives while providing our advisory teams the necessary flexibility to negotiate with their clients. The following are the guiding principles:

- Deploying the right resources to perform quality work as outlined in our organizational chart. We will deploy a team with extensive experience within pension operating models, including board governance and administration, organization structures and staffing, investment policy and oversight, legal compliance, risk management and controls, and IT operations.
- A long-term relationship that is mutually satisfying must be grounded in efficient and effective services provided at a fair and reasonable fee.
- Transparent, open communication requires us to engage in candid dialogue around our fees and provide a sufficient level of detail to our clients to support our fees. You can expect to see timely budget to actual analyses covering all aspects of the engagement on a periodic basis to be co-developed with you. As part of this analysis, we would identify and seek to gain agreement on the driver of any budget deviations and the party who bears responsibility. We take project management very seriously and believe it to be the joint responsibility of both you and EY working together in a transparent and consultative way.

Our goal is to work with ORSC to develop an appropriate balance between business risk and the cost of our services. We are committed to delivering high-quality services in a cost-effective manner. We have estimated our fees to provide the proposed services, and believe they represent only a fraction of the potential benefits to be realized by your organization

We understand that this project represents a significant undertaking for ORSC and SERS team members, and commit to working diligently with management and project owner(s) to make this program as successful as possible.

- We welcome the opportunity to review these together to confirm that all parties are acting as a partnership.
- Early and continual involvement of management in fee discussions keeps our clients at the center of the relationship and fee-related issues are discussed to avoid surprises.

EY is committed to providing the highest quality service to the ORSC at rates that are representative of the value we deliver to our clients. Our fees for this engagement, as illustrated below, will be billed as incurred on a time and materials basis. Due to the importance of this initiative to the ORSC, our proposed approach, methodology and team structure includes the participation of experienced executives. The following table shows a detailed breakdown of the range of estimated professional fees by work stream based on our understanding of the scope defined in the RFP.

EY understands the importance of this initiative for ORSC and partnering with the vendor that is selected. While we are proposing a fee structure that we anticipate will work for you, we do not want the proposed fees to stand in the way of a mutually satisfactory, long-term relationship. Accordingly, we hope that we can have an open dialogue about a mutually agreed-upon agreement to fully align on scope, team structure, approach, timeline and pricing.

Team	Resources	Rate	Total hours	Total fees
Core Engagement Team	Dan Bender	\$421.70	144	\$60,724.80
	Belal Khalid	\$421.70	144	\$60,724.80
	Ryan Burger	\$394.20	624	\$245,980.80
	Doug Montone	\$394.20	368	\$145,065.60
	Patrick Mara	\$261.50	640	\$167,360.00
	Staff (TBD)	\$148.80	640	\$95,232.00
Subject-Matter Advisors	Various individuals to be included as relevant throughout the	\$407.95	168	
	engagement			\$68,535.60
Total engagement fees			\$843,623.60	

Travel and other out-of-pocket expenses (printing, supplies, etc.) will be billed at 15% of professional fees.

Our assumptions

The timeline for completing this project is very compressed. As such, efficient execution and effective communication will be critical to the success of this engagement. EY will work closely with ORSC to establish robust project management and effective communication protocols to report status and escalate key engagement risks to ORSC for timely resolution. The activities, timeline and cost estimates provided in this proposal are based on the following key assumptions:

- ▶ ORSC shall assign a qualified person to oversee the services provided by EY.
- ORSC and SERS will provide relevant current state documentation prior to fieldwork start date to allow sufficient preparation and planning for the compressed timeline of this engagement. These documents may include internal flow charts, current reporting procedures, organization charts, current processes narratives and policies, roles and responsibilities, and existing system architecture. We understand that many of these may be publically available documents and will review these files to help ensure the most successful project mobilization.
- ORSC and SERS will make available relevant key personnel for facilitated sessions, interviews, meetings and conference calls. Access to key personnel will be critical for the EY project team to achieve the following:
 - Quickly gain a good understanding of the current organizational structure, processes and controls, risk management, roles and responsibilities, people and supporting systems.

We trust that you have seen and felt our desire to work with ORSC and SERS and would welcome the opportunity to discuss our fee structure or alternative structures with you in greater detail.

About EY

EY is a global leader in assurance, tax, transaction and advisory services. The insights and quality services we deliver help build trust and confidence in the capital markets and in economies the world over. We develop outstanding leaders who team to deliver on our promises to all of our stakeholders. In so doing, we play a critical role in building a better working world for our people, for our clients and for our communities.

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