

BOARD OF TRUSTEES' MEETING

NOVEMBER 15, 2017

MEETING MINUTES

EMPLOYEES' RETIREMENT SYSTEM OF THE SEWERAGE AND WATER BOARD OF NEW ORLEANS

ROLL CALL

The Board of Trustees of the Employees' Retirement System of Sewerage and Water Board of New Orleans (ERS SWBNO) met on Wednesday, November 15, 2017 at approximately 10:30 AM in the Board Room at 625 St. Joseph Street. James Thompson, attorney in the Office of Special Counsel, called the roll and confirmed the following members were present: Trustee Robin Barnes, Trustee Chris Bergeron, Trustee Marion Bracy, Trustee Dr. Tamika Duplessis, Trustee Ralph Johnson, Trustee Joseph Peychaud, Trustee Marvin Russell, and Trustee John Wilson.

The following member(s) were absent: Trustee Stacy Horn Koch, Mayor Mitch Landrieu, and Trustee Chante Powell.

Staff present included: Mr. Harold Marchand and Mr. James Thompson, Office of Special Counsel; Dr. Tim Viezer, Chief Investment Officer, and Ms. Jasmin Lawrence, Board Relations Staff.

Mr. Thompson recommended that in the absence of the Mayor, that the Board appoint an Interim Chairperson and suggested that Trustee Peychaud serve in that capacity. Trustee Bracy moved to appoint Trustee Peychaud as Interim Chairperson and Trustee Wilson seconded the motion. The motion carried.

APPROVAL OF PREVIOUS BOARD MINUTES

Trustee Wilson moved to approve the minutes of the October 18, 2017 Board of Trustees meeting and Trustee Bergeron seconded the motion. The motion carried.

PENSION COMMITTEE

Key Pension Committee Agenda Topics:

Action Items:

- R-140-2017 – Trustee Education

Information Items:

- FFC Capital Management Presentation
- Chief Investment Officer's Presentation

Information Items:

- FFC Capital Management, "Quarterly Performance Report: Period Ending September 30, 2017"
- CFA Institute, A Primer for Investment Trustees

- Charles D. Ellis, "Murder on the Orient Express: The Mystery of Underperformance," Financial Analysts Journal, July/August 2012.

Interim Chair Peychaud reported on the November 16, 2017 Pension Committee meeting. The Pension Committee reviewed third quarter investment performance.

Trustee Wilson moved that Board approve the Pension Committee report and approve the corresponding resolutions. Trustee Bracy seconded the motion. The motion carried.

CORRESPONDING RESOLUTIONS

The following resolutions were adopted in conjunction with approval of the Committee report as follows:

R-140-2017 – Trustee Education

EXECUTIVE SESSION

There was no executive session during the Board of Trustees' November 15, 2017 meeting.

INFORMATION ITEMS

The following items were submitted for informational purposes only:

- CFA Institute, [A Primer for Investment Trustees](#)

ANY OTHER MATTERS

Trustee Bergeron asked whether the Employees' Retirement System was obliged to follow the Sewerage & Water Board's Professional Services Procurement Policy. Attorney James Thompson noted that the Employees' Retirement System pension fund and the Sewerage & Water Board were separate entities. Mr. Thompson said he was unaware of any formal adoption of that policy by the Board of Trustees. Dr. Viezer added that for purposes of expediency, the Sewerage & Water Board's Professional Services Procurement Policy had been followed for the asset-liability consultant search. Attorney Harold Heller recalled that the Pension Committee itself may have served as the [Proposal] Selection Committee in the past. Dr. Viezer added that conversations with FFC Capital Management suggested a different process had been used in selecting managers, but it had been [six] years since an active manager was last hired. Trustee Peychaud noted that the composition of Proposal Selection Committees had been a point of discussion in the past on the Pension Committee. Dr. Viezer stated that the topic of best practices in investment consultant and investment manager searches would be discussed at the December Pension Committee. Attorney James Thompson said he would provide an answer as to whether the Board of Trustees could adopt a separate professional services procurement policy.

ADJOURNMENT

There being no further business to come before the Board, Trustee Johnson moved to adjourn. Trustee Bracy seconded. The meeting adjourned at approximately 10:41 AM.



"RE-BUILDING THE CITY'S WATER SYSTEMS FOR THE 21ST CENTURY"

EMPLOYEES' RETIREMENT SYSTEM OF THE Sewerage & Water Board OF NEW ORLEANS

MITCHELL J. LANDRIEU, President

**625 ST. JOSEPH STREET
NEW ORLEANS, LA 70165 • 504-529-2837 OR 52W-ATER
www.swbno.org**

December 18, 2017

The Pension Committee met on Monday, December 18, 2017 in the Board Room, 625 St. Joseph Street, New Orleans, LA. The meeting convened at 3:00 P.M.

Present:

Director Joseph Peychaud, Chairman
Director Ralph Johnson
Ms. Chante' Powell
Mr. Christopher Bergeron
Mr. Marvin Russell

Also in attendance: Mr. Octave Francis III and Ms. Melanie Parent of FFC Capital Management; Mr. Mike Conefry of Conefry & Company; Ms. Janice Leaumont of Capital One; and the following Sewerage & Water Board staff - Ms. Sharon Judkins, Deputy Director – Administration; Ms. Veronica Washington, Employee Relations; Ms. Sonji Skipper, Personnel Administration; Mr. Dexter Joseph, Director of Budget and Planning; Mr. Willie Mingo, Director of Procurement; Mr. Steve Woolridge, Finance-Treasury; Mr. James Thompson, Office of Special Counsel; and Dr. Tim Viezer, Chief Investment Officer.

ACTION ITEMS:

1. Cost of Living Allowance (R-177-2017)

Mr. Ralph Johnson moved to recommend that the Board of Trustees affirm resolution R-177-2017. Mr. Marvin Russell seconded the motion. The motion carried.

The Resolution listed above will be moved to the Board of Trustees for approval.

2. Hire Callan LLC as Asset-Liability Study Consultant (R-162-2017)

Mr. Marvin Russell moved to recommend that the Board of Trustees hire Callan LLC to serve as the asset-liability consultant as described in resolution R-162-2017. Mr. Chris Bergeron seconded the motion. The motion carried.

The Resolutions listed above will be moved to the Board of Trustees for approval.

PRESENTATION ITEMS:

Chairman Joseph Peychaud began the meeting by asking Chris Bergeron to read the Employees' Retirement System mission statement into the record: "to prudently manage an actuarially sound pension fund solely in the interest of participants and beneficiaries in a cost-effective manner."

Ms. Sharon Judkins brought before the committee a ministerial action – the affirmation of calculating and implementing a cost of living adjustment (COLA) for qualifying retirees. Ms. Judkins answered Mr. Ralph

Johnson's request for the authorizing language for the COLA by referring to Article VI.6.1(d)(1) of the Rules and Regulations of the Employees' Retirement System of the Sewerage & Water Board of New Orleans. Ms. Judkins stated that the COLA would be 1.934% for a qualifying retiree's the first \$10,000 (ten thousand dollars) of their annual pension. Mr. Marvin Russell added perspective by noting that a qualifying retiree would thus receive \$193.40 for the year. Ms. Judkins added that there were 478 qualifying retirees and the cost of the adjustment was approximately \$77,000. Mr. Dexter Joseph clarified that this cost was not part of the Sewerage & Water Board O&M budget but rather paid out of the assets of the pension fund. Mr. Russell noted that he was a qualifying retiree and asked Mr. James Thompson from the Office of Special Counsel as to whether he should abstain from the vote. Mr. Thompson noted that this was an action that is performed according to the Rules and Regulations without the exercising of individual judgment, and therefore Mr. Russell could vote.

Before turning to the second action item, Dr. Tim Viezer acknowledged and thanked Chris Macaluso, who works for Ms. Melinda Nelson in Information Systems for his initiative and good work and her support in volunteering to build a page for the Employees' Retirement System pension fund on the Sewerage & Water Board intranet. The pension fund page is live and helps the Board of Trustees uphold their obligation in the CFA Code of Conduct for Members of a Pension Scheme Governing Body to "communicate with participants, beneficiaries, and supervisory authorities in a timely, accurate, and transparent manner."

Dr. Viezer noted that: the search for an asset-liability consultant followed the Sewerage & Water Board's Professional Services Procurement Policy, the search was advertised nationally, four responses to the Request for Proposal were received, and that the Proposal Section Committee scored and ranked the responses. As a result, Callan LLC received the highest score. Dr. Viezer thanked Mr. Jesse Evans, Mr. Mohammed Owusu, Ms. Tamika Hyde, and Mr. James Thompson for their service on the Proposal Section Committee. Chairman Peychaud noted that his review of the submitted material suggested that the process followed the Procurement Policy "to the letter" and that Callan was also the lowest bid. Chairman Peychaud also noted that the resolution empowered the Chief Investment Officer to execute the contract subject to all appropriate reviews.

Dr. Viezer then turned to the upcoming general consultant search. FFC Capital Management's contract will expire in March 2018 after nearly eight years. The contract is going to be rebid. Dr. Viezer solicited input from the Pension Committee on (1) the consultant deliverables, especially the consultant's role in the selection of investment managers and (2) the process for selecting the consultant. He outlined the rationale for a role for the general investment consultant in investment manager searches. Mr. Octave Francis of FFC Capital Management described how the Pension Committee used his firm in past investment manager searches and how his firm screened and conducted due diligence on investment managers. Dr. Viezer outlined an initial suggestion that a professional services procurement policy for selecting investment consultants and investment managers be drafted for approval by the Committee and the Board of Trustees and overseen by the Director of Procurement, Mr. Willie Mingo. Chairman Peychaud asked Mr. Thompson if he had an answer to the Committee's question as to whether the Board of Trustees could adopt separate policies. Mr. Thompson affirmed that the Trustees could adopt separate policies. Mr. Johnson asked about the timing of the search. Dr. Viezer answered that the search would be completed in June or July 2018 and that FFC had agreed to serve on a month-to-month contract.

Dr. Viezer reviewed the fund's compliance with the policy target asset allocation. He noted that all but two categories were within the allowable ranges. The U.S. Large Cap Core and U.S. Large Cap Value allocations were both slightly over the maximum range. In conformance with the Investment Policy Statement, a rebalancing of the fund was completed and coincided with the provision of cash to make pension payments. He did note that as he had not received delegated authority to sign trade executions, about \$10 million remained uninvested during November. He estimated that the opportunity cost for the month was about \$280,000 or 13 bps of lost performance at the total fund level. Mr. Francis noted that this had been an issue in the past and that trades were left unexecuted for months. Dr. Viezer noted that the delegation of authority was part of the work on the "governance matrix."

Chairman Peychaud told the Committee that he had working group assignments. Several assignments would be made when the Pension Committee vacancies were filled. However, Chairman Peychaud wanted to continue to work on pension communication and asked Mr. John Wilson to work with Dr. Viezer to set up "mass meetings" for employees and asked Mr. Russell to draft a letter to retirees for approval by the Committee and Board of Trustees. Chairman Peychaud asked both members to report back in January 2018.

INFORMATION ITEMS:

Information item(s) 5 through 9 were received.

ADJOURNMENT:

There being no further business to come before the Pension Committee, the meeting adjourned at approximately 4:15 P.M.

Respectfully submitted,

Joseph Peychaud, Vice Chair

RECOMMENDATION TO HIRE CALLAN LLC TO CONDUCT AN ASSET-LIABILITY STUDY

WHEREAS, the Government Finance Officers Association considers it a best practice that retirement systems periodically conduct asset-liability studies;

WHEREAS, a Request For Proposal was issued and four consulting firms responded by October 20, 2017; and

WHEREAS, in accordance with the Sewerage & Water Board's Professional Services Procurement Policy, a Proposal Selection Committee was formed and evaluated responses from Aon Hewitt Investment Consulting, Inc., Callan LLC, RVK, Inc., and Verus Advisory, Inc.; and

WHEREAS, the Proposal Selection Committee scored these responses in accordance to the criteria and weights outlined in the Request For Proposal in an open meeting on November 27, 2017 and this scoring resulted in Callan LLC receiving the highest score; and

WHEREAS, the Chief Investment Officer presented the Pension Committee at its December 18, 2017 meeting a recommendation outlining the search process and result; and

WHEREAS, the Pension Committee recommends the selection of Callan LLC to conduct an asset-liability study.

NOW, THEREFORE, BE IT RESOLVED by Board of Trustees of the Employees' Retirement System of Sewerage and Water Board of New Orleans that the Chief Investment Officer be authorized to negotiate and enter into an agreement with Callan LLC to conduct an asset-liability study subject to the contract reviews outlined in the Professional Services Procurement Policy.

This resolution shall be incorporated into the By-Laws of the Sewerage and Water Board of New Orleans.

I, _____, Executive Director,
Employees' Retirement System of the Sewerage and Water Board of New Orleans,
do hereby

certify that the above and foregoing is a true and
correct copy of a Resolution adopted at the Meeting of the
Board of Trustees of the Employees' Retirement System
of Sewerage and Water Board of New Orleans, duly called and held,
according to law, on **December 20, 2017**.

_____, **EXECUTIVE DIRECTOR**
EMPLOYEES' RETIREMENT SYSTEM OF THE SEWERAGE AND WATER BOARD OF NEW ORLEANS

JANUARY 1, 2018 COST OF LIVING ADJUSTMENT FOR BOARD PENSIONERS

WHEREAS, it is the policy of the Sewerage and Water Board of New Orleans to provide a Cost of Living Adjustment to pensioners based on the increase in the Consumer Price Index, with a maximum increase of no more than 2% as provided in Article VI, Section 6.1(d)(1) of the Rules and Regulations of the Employees' Retirement System of the Sewerage and Water Board of New Orleans; and

WHEREAS, the change in the Consumer Price Index for All Urban Wage Earners and Clerical Workers from August 2016 to August 2017 is 1.934%; and

WHEREAS, the total increase to the Pension Fund of the Sewerage and Water Board of New Orleans to implement the January 1, 2018 Cost of Living Adjustment to approximately 478 pensioners is \$77,000.00; and

WHEREAS, such funds are to be made available by the Pension Fund of the Sewerage and Water Board of New Orleans to provide for a Cost of Living Adjustment to said pensioners; and

NOW THEREFORE, BE IT RESOLVED, that the Pension Fund of the Sewerage and Water Board of New Orleans implement a 1.934% cost of living increase on the first ten-thousand dollars (\$10,000) of said pensioners' original Retirement Allowance (that is, the annual pension benefit paid at the time of retirement), effective January 1, 2018, for pensioners who attained age 65 on or before December 31, 2017, approximately 478 pensioners. The cost of living increase for a partial year of retirement after age 65 shall be pro-rated based on the actual number of days retired and over age 65 during the twelve-month period ending December 31, 2017 (that is, the number of days elapsed between attainment of age 65 and December 31, 2017).

I, Bruce H. Adams, Interim Executive Director, Sewerage and Water Board of New Orleans, do hereby certify that the above and foregoing is a true and correct copy of a resolution adopted at the Regular Meeting of said Board, duly called and held, according to law, on December 20, 2017.

Bruce H. Adams
Interim Executive Director
Sewerage and Water Board of New Orleans



SEWERAGE AND WATER BOARD

Inter-Office Memorandum

Date: November 29, 2017

To: Chairman Joseph Peychaud and the Pension Committee

From: Timothy W. Viezer, PhD, CFA, CAIA – Chief Investment Officer

Re: Recommendation to Hire Callan LLC for Asset-Liability Study

Recommendation

I recommend that the Pension Committee of the Employees' Retirement System of the Sewerage & Water Board of New Orleans (ERS) approve the choice of the Proposal Selection Committee¹ (PSC) and forward the decision to hire Callan Associates ("Callan") to perform an asset-liability study to the Board of Trustees for endorsement.

Summary

- The process followed the Professional Services Procurement Policy.
- The Request for Proposal (RFP) was advertised nationally and four, large, well-known, qualified investment consulting firms responded.
- The PSC evaluated the four responses and scored the responses according to ranking criteria and weighting established in the RFP. The PSC selected Callan LLC.
- Callan LLC was founded in 1973 and has \$2.2 trillion in Assets Under Advisement (AUA). The firm 188 employees and is 100% employee-owned. Since 2008, Callan has performed 196 asset-liability studies or about 21 studies per year. The seven person asset-liability team has an average of 26 years of experience and 16 years tenure at Callan. Callan has proposed a one-time, all-inclusive fee of \$45,000.

Background

What is an Asset-Liability Study?

An asset-liability study is a tool for understanding the dynamic relationship between pension plan assets and liabilities over time. An asset-liability study the only standard analysis that fully links all three aspects of a pension plan's key financial drivers: benefits policy, contribution policy, and investment policy. An asset-liability study identifies *future trends* in the financial health of a pension plan based upon economic uncertainties that may not be evident from an actuarial valuation, which provides only a snapshot at a *point in time*. An asset-liability study illustrates the impact of various asset allocation targets on funded status

¹ Short biographies of the five PSC members are included in the Appendix.

and required contributions under a range of macroeconomic scenarios. An asset-liability study will help determine the appropriate level of risk in the context of the pension plan liabilities.

Why Conduct an Asset-Liability Study?

The mission of the ERS is to “prudently manage an actuarially sound pension fund solely in the interest of participants and beneficiaries in a cost-effective manner.” We want to honor S&WB pension obligations. In order to prepare to try to honor these pension obligations, we need a forward-looking tool to evaluate the pension’s key financial drivers.

The Government Finance Officers Association best practice² suggests that “retirement systems should periodically conduct asset-liability studies for use in reviewing their asset allocation policies.” It is a standard industry practice for a pension plan sponsor to conduct an asset-liability study every 3-5 years or either after or in anticipation of a significant change in demographics, plan design, sponsor circumstances, or funded status. Conversations with our consultant, former Executive Director, and Pension Committee members suggest that S&WB has not conducted an asset-liability study since before Katrina (perhaps 13 years ago). Moreover, we anticipate that about 40% of our workforce is eligible to retire within the next 5 years.

The Chief Investment Officer (CIO) recommended conducting an asset-liability study to senior management and the Pension Committee in the face of: (1) a potentially large change in the demographics of the S&WB active/retired participants, (2) the need to review the asset allocation, and (3) the desire to move the management of the pension in line with best practice.

Prior to the hiring of the CIO, FFC Capital Management also recommended conducting an asset-liability study. However, FFC does not have the internal capability to conduct an asset-liability study and would have needed to subcontract the work. As a result, the CIO recommended soliciting RFPs through S&WB’s Professional Services Procurement Policy.³

Process

The search for an asset-liability study adhered to SWB’s Professional Services Procurement Policy. The outline of steps and dates are included here to document that compliance and for the Pension Committee’s reference in discussions of the optimal search processes for investment-related vendors for the ERS.

- June 1 – CIO forwarded “Memo Recommendation on Asset-Liability Study Search” to the Deputy Director – Administration and later discussed with the Executive Director. The recommendation was accepted.

² Government Finance Officers Association, Best Practice “Sustainable Funding Practices for Defined Benefit Pensions and Other Postemployment Benefits (OPEB),” January 2016.

³ Sewerage & Water Board of New Orleans Policy Memorandum No. 95 “Professional Services Procurement Policy,” Revised October 15, 2014.

- June 19 – CIO presents an action plan that includes an asset-liability study to the Pension Committee.
- July 17 – CIO introduced asset-liabilities studies to the Pension Committee.
- July 25 – CIO forwards to the Staff Contract Review Committee a completed “Contract Description” for the review and notes a Disadvantaged Business Enterprise (DBE) allocation was neither feasible nor industry practice with respect to asset-liability studies.
- July 28 – CIO recommends to the Executive Director, five individuals for the Proposal Selection Committee.⁴
- August 9 – Staff Contract Review Committee met and set an EDBP participation goal of 0% for the asset-liability consultant search.
- September 6 – CIO completed draft RFP and forwarded it for approval to senior management.
- September 27 – The Director of Procurement issued the RFP and advertised the search nationally in Pensions & Investments, later revised removing minimum AUM
- October 2 – Procurement posted a revised RFP which removed the minimum AUA requirement.
- October 16 – CIO updated the Pension Committee on the search’s progress.
- October 20 – 4 RFPs were received by the due date.
- November 7 – The Director of Procurement reviewed the RFP evaluation process with members of the Proposal Selection Committee and received signed statements indicating each member had no conflicts of interest.
- November 27 – The PSC met in a public meeting and announced their scores for each of the four investment consultant firms. The RFP included the relative weights of evaluation criteria which are summarized below.

Table 1: Relative Weights of RFP Evaluation Criteria		
General Topic	Questions Focused On	Points
Organization	Longevity, stability, focus	5.0
Dedicated Resources	Quality, quantity	15.0
Experience	Performing A-L studies, specialized	15.0
Overall Process	Clarity, robustness, innovation, reasonable timeline	5.0
Specific Process	Asset allocation, liability modeling, liquidity modeling, stochastic simulations, scenario modeling	20.0
Customization	Scenarios	7.5
Customization	Risk Capacity	10.0
Output	Statement of risk appetite	7.5
Output	Metrics	5.0
Fees	Fees	10.0
TOTAL		100.0

The RFP (excluding appendices) was 18 pages long and contained over 70 questions.

⁴ The original PSC recommendation included Chief Financial Officer Bob Miller. However, Bob left S&WB on October 13 to become the Director of Public Works at the City of Jackson Mississippi. Based upon Bob’s suggestion for a replacement and staff availability, Tamika Hyde

Short Description of Responding Firms

- Aon Hewitt Investment Consulting, Inc. (AHIC) was founded by legacy organizations that date to 1974. AHIC is headquartered in Chicago, Illinois and is an indirect, wholly-owned subsidiary of Aon plc which is listed in the NYSE. AHIC has over 300 employees and has \$2.0 trillion in Assets Under Advisement (AUA). AHIC has performed 543 asset-liability studies over the past two years and averages 200-300 studies per year. Their investment policy team is led by an individual with 23 years of experience and 10 years tenure at AHIC. The team leverages 30 individuals in the United States. AHIC proposed a fee of \$148,000.
- Callan LLC was founded in 1973 and has \$2.2 trillion in AUA. The firm is headquartered in San Francisco, California and has 188 employees and is 100% employee-owned. Since 2008, Callan has performed 196 asset-liability studies or about 21 studies per year. The seven person asset-liability team has an average of 26 years of experience and 16 years tenure at Callan. Callan has proposed a one-time, all-inclusive fee of \$45,000.
- RVK, Inc. (formerly known as R.V. Kuhns & Associates, Inc.) was founded in 1985 and has \$2.1 trillion in AUA. The firm is headquartered in Portland, Oregon and has more than 100 employees and is 100% employee-owned. Since 2008, RVK has performed 50 asset-liability studies or about 5 studies per year. The five person project team has an average of 22 years of experience. The four employees have an average tenure of 4.5 years. The team includes a consulting actuary outside the firm. RVK proposed an all-inclusive fee of \$43,500 for Phase I of the asset-liability study. For Phase II, RVK proposed a fee of \$7,500 per additional report/output (scenario) and \$2,500 for each additional in-person meeting.
- Verus Advisory, Inc. (formerly known as Wurts & Associates, Inc.) was founded in 1986 and headquartered in Seattle, Washington. The firm has 85 employees and has \$0.3 trillion in AUA. Since 2004, Verus has performed 200 asset-liability studies or about 15 studies per year. The six person team has an average of 13 years of experience and 6 years tenure. Verus proposed an all-inclusive fee of \$95,000.

The PSC evaluated each of the 4 RFP responses and scored them using the information in Table 1. The combined scores (out of a possible total of 500; higher is better) of the PSC for each of the four firms are ranked below in Table 2. The PSC scored Callan the highest and therefore is the firm recommended.

Table 2: Ranking of PSC Combined Scores	
Callan	422.0
RVK	418.5
Verus	414.5
Aon	413.0

Next Steps

Contingent upon the Pension Committee's acceptance of this recommendation and Board of Trustee approval, the CIO and Legal will negotiate a contract and circulate the contract to the

Departments listed in the Professional Services Procurement Policy to ascertain that it complies with all policies, regulations, and requirements under their jurisdiction.

Appendix: Short Biographies of Proposal Selection Committee Members

Jesse Evans, Jr. is the Director of the City of New Orleans Employees' Retirement System. Jesse has managed the daily operations of that pension plan over the past 10 years. Prior to his employment with the City of New Orleans, Jesse worked for 13 years in both banking and investments. Jesse earned 2 bachelor's degrees (Accounting and Management Information Science) and an MBA with a concentration in Finance from Louisiana Tech University. He was formerly licensed with FINRA where he held Series 7, 24, 53, 63, and 65 licenses.

Tamika Hyde is a Management Development Specialist at the Sewerage & Water Board of New Orleans. Prior to joining S&WB 2.5 years ago, she worked in accounting. Tamika has earned a bachelor's degree in Accounting from Southern University at New Orleans and an MS in Accounting from the University of Phoenix.

Mohammed Owusu is an Administration Project Manager at the Sewerage & Water Board of New Orleans. Prior to joining S&WB, his 29 years of experience working in state and local government included roles as Deputy Director to the Deputy Chief Administrative Officer for Finance and Administration for the City of Richmond, Virginia, Associate Treasurer for the District of Columbia, and Debt/Innovative Finance Manager for the Virginia Department of Transportation. Mohammed earned a bachelor's degree in Philosophy and English from the University of Ghana, Legon and an MBA with a concentration in Finance from Texas A&M.

James Thompson is currently an attorney in the Office of Special Counsel of the Sewerage & Water Board of New Orleans. Prior to joining the Office of Special Counsel in 2015, James was in private practice for six years advising governmental pension plans on tax and other related matters. Of particular note, he has represented the Louisiana State Employees Retirement System, the Louisiana Sheriffs' Retirement and Relief Fund, the Louisiana Assessors' Retirement Fund, the Louisiana Clerks of Court Retirement System, the Louisiana Municipal Employees Retirement System and the New Orleans Firefighters Pension and Relief Fund. He earned a bachelor's degree in Economics and International Business from Penn State University, JD from Loyola University New Orleans, and LLM in Taxation from Villanova University's Charles Widger School of Law. James also sits on the Board of Directors of the Louisiana Trustee Education Council.

Tim Viezer is the Chief Investment Officer at the Sewerage & Water Board of New Orleans. Prior to joining S&WB, he had 23 years of experience working for public pensions in Ohio and North Carolina and as a Managing Director and Acting Chief Investment Officer at the University of Cincinnati endowment. He also taught economics, finance, and statistics for 14 years as an adjunct professor. Tim earned 4 degrees at Kent State University: BBA and MAE in Economics and BA and MA in Political Science; as well as a PhD in Agricultural (applied) Economics with a concentration in finance from The Ohio State University. He is a Chartered Financial Analyst (CFA) and Chartered Alternative Investment Analyst (CAIA) charter holder.



October 20, 2017

Sewerage and Water Board of New Orleans

Request for Proposal: Asset-Liability Study
Consulting Services

Prepared by **Callan LLC**
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October 20, 2017

Willie M. Mingo Jr.
Director of Procurement
Sewerage and Water Board of New Orleans
625 St. Joseph Street Room 133
New Orleans, Louisiana 70165

Dear Mr. Mingo,

On behalf of Callan Associates, thank you for the opportunity to submit our response to the Sewerage and Water Board of New Orleans Request for Proposal for asset-liability study consulting services for the Employees' Retirement System of the Sewerage and Water Board of New Orleans. As a firm whose primary business is investment consulting, our success relies on our ability to deliver excellent products and services to our clients.

Over the years, our clients have benefited from many qualities which differentiate our firm from its competition:

- *A Singular Focus on Consulting* - Complete objectivity is central to our client service philosophy. We do not engage in any business that might distract our attention or compromise our advice and guidance to the Board.
- *Leadership in Global Investment Consulting* - Callan Associates is one of the oldest firms in investment consulting, bringing 44 years of investment expertise to each client relationship. While many firms have followed our lead in providing consulting services, there is one asset they cannot duplicate – our people. Callan consultants are widely known, highly experienced, innovative investment professionals. Many of our practical, analytical "firsts" have become standards for the industry.
- *A Dynamic Team Approach to Client Service* - A carefully selected team of Callan consultants work with each client to create a true investment partnership. To ensure that S&WB receives the full, collective wisdom of our consultants and the full benefit of Callan's unparalleled resources, oversight committees comprised of senior consultants carefully review all projects.
- *Valuable, Timely Education and Research* - Callan is the leading educator of institutional investors. Through our timely educational programs and meticulous, practical research, we help clients stay abreast of the latest investment trends. And, to ensure the quality of the knowledge we share, our associates' continuing education is a priority for us as well.

Callan

- *100% Employee-owned* – Now in our 44th year, Callan has remained an employee-owned company throughout our history. We have a financially strong firm whose ownership structure aligns our interests with our client's interests, especially during the current challenging market environment.

We can confirm that Callan meets all of the minimum requirements laid out in Section V and are willing and able to provide all of the services described in Section II "Description of the Work to be Performed" of this RFP.

We do not believe there to be any conflicts of interest that would arise out of us serving this relationship. We have not identified any relationships that would impair our ability to perform if awarded the contract. We do not utilize subcontractors.

We appreciate your time and consideration in reviewing our capabilities. If you have any questions, please contact me at (770) 618-2147 or chapman@callan.com.

Kind regards,



Cody Chapman, CFA, CAIA
Vice President



Weston Lewis, CFA, CAIA
Senior Vice President

Enclosure(s)

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Representations and Warranties

- i. Firm warrants that it meets or will meet before the award of the Investment Consultant Services Agreement ("Agreement"), the bonding requirement provided by the Employment Retirement Income Security Act of 1974 (ERISA) or that it carries at least an equivalent fidelity bond that will be applicable to proposer's actions under the Agreement (unless exempt and explanation of exemption is attached).

Include in Section V of our response is our Certificate of Liability Insurance which includes information on our fidelity bond.

- ii. Firm warrants that it maintains errors and omissions insurance as well as fiduciary liability insurance providing a prudent amount of coverage for negligent acts or omissions and that such coverage will be applicable to proposer's action under Agreement.

Include in Section V of our response is our Certificate of Liability Insurance which includes information on our errors and omissions and fiduciary liability insurance.

- iii. Firm warrants that it will not delegate its fiduciary responsibilities assumed under the Agreement.
- iv. Firm warrants that it has completed, obtained and performed all registrations, filings, approvals, authorizations, consents or examinations required by a government or governmental authority for acts contemplated by the Agreement.
- v. Firm warrants that it meets all of the minimum qualifications applicable to the firm under the RFP as follows:
 1. Firm must have at least \$50 billion (fifty billion dollars) in Assets Under Advisement (AUA). Please state your most recently published AUA.

Our Assets under Advisement as of 9/30/2017 is \$ \$2.2 trillion.

2. Firm must have completed at least 5 (five) asset-liability studies for a (corporate, public, or Taft-Hartley) pension fund. If selected, S&WB will ask for contact information to verify the accuracy of the response. Please complete the table below:

Date Completed	Pension Name	Type	Asset Size (millions)
09/2017	Denver Water	Public	\$303
11/2017	American Water Works Company	Corporate	\$1,527
09/2017	Utah Retirement System	Public	\$29,700
12/2016	Entergy Corporation	Corporate	\$5,641
10/2015	Harris Corporation	Corporate	\$4,664

- 3. Firm must have at least 5 (five) years of experience in conducting assetliability studies in-house for (corporate, public, or Taft-Hartley) pensions. What year did your firm first conduct an asset-liability study? (Firms with over 5 years of asset-liability study experience may provide an approximate date).**

Callan has been conducting asset/liability studies since the inception of our firm in 1973.

- 4. Individual leading the asset-liability study efforts at your firm must have:**
 - a. at least 10 (ten) years of investment/actuarial experience;**
 - b. at least 5 (five) years of asset-liability study experience; and**
 - c. at least 3 (three) years of tenure at your firm.**

We can confirm that whichever individual(s) from our Capital Markets Research Group responsible for conducting the asset-liability study for S&WB will meet the above qualifications.

- 5. Your firm must be able to provide customized scenarios similar to those described in section II.B.1.a.iv.(b) and section II.B.1.a.iv.(c).**

(Continued from previous page)

Callan LLC
Name of Firm

10/19/17
Date


Signature


Vice President
Title

FIRM NAME: Callan LLC
300 Galleria Parkway
ADDRESS: Suite 950
Atlanta, GA 30339

TELEPHONE #: 770 618 2140

E-MAIL ADDRESS: Chapman@callan.com

CLIENT CONTACT: Cody Chapman

SIGNED: 

PRINT NAME: Cody Chapman

TITLE: Vice President

DATE: 10/19/17

A. Organizational Background:

1. Give a brief history of your organization including the following:

a. Year of organization;

Callan was founded as an employee-owned investment consulting firm in 1973.

b. Year of initiation of investment consulting business;

We have been providing investment consulting services to institutional clients since our inception in 1973.

c. Development of significant business lines;

In addition to our core fund sponsor consulting and investment research areas, our business includes dedicated teams that consult with investment managers (Institutional Consulting Group, since 1988) as well as boutique consulting firms and independent financial advisors (Independent Adviser Group, since 1991). These services include providing research, education, performance measurement, data, and analytical tools. In 2006, we launched our discretionary consulting and asset management group to address the need for customized OCIO services (Trust Advisory Group).

d. Nature of firm's ownership;

Callan LLC is a limited liability company incorporated in the State of California, and is 100% privately owned by 90 professionals.

e. Nature of relationships with affiliated companies or joint ventures;

Callan does not have any parent company, affiliated companies, strategic partnerships or joint ventures.

f. Organizational issues/changes within the last three years.

Effective January 1, 2017, Inga Sweet became Chief Operating Officer of the firm, a role previously held by Ann DeLuce, who retains her role as Chief Compliance Officer. Also, effective September 2017, President and Director of Research, Greg Allen, assumed the title of CEO and President as well as Chief Research Officer. Current Chairman and CEO, Ron Peyton, became Executive Chairman and current Executive Vice President, Butch Cliff assumed the title of Director of Research. These changes formalized our long-standing leadership succession plan.

2. Describe the current structure of your organization. Provide an organizational chart(s) showing the relationships and authority within the consultant services unit and within the organization.

While general consulting is our primary business, Callan does take an integrated approach to consulting. This approach allows us to best serve the needs of all participants along the institutional investment spectrum. We have chosen this structure because we feel it results in the highest level of consultation possible. Our model

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creates a diversified revenue stream that allows for consistent reinvestment in the people, systems and tools required to meet the needs of today's institutional investors. The net benefit to our clients is a richer data set, a more robust suite of analytical tools, and a deeper, stronger consulting team to help them make smarter and more confident investment decisions. These are our four lines of business:

Fund Sponsor Consulting: Our fund sponsor clients are among the most highly regarded organizations in the U.S., overseeing more than \$2.2 trillion in combined assets. Our investment consulting services address the totality of a fund sponsor's needs. Our consulting approach is custom and holistic. Fund Sponsor Consulting serves sponsors of defined benefit plans, defined contribution plans, endowments, foundations, insurance, hospitals, healthcare systems, and nuclear decommissioning trusts as well as other large institutional asset pools. Supported by a deep team of research professionals, this division is organized to deliver customized solutions that meet the needs of even the most sophisticated institutional investment programs. Services include strategic planning, plan implementation, monitoring and evaluation, and continuing education. The services to the S&WB Plan would be provided by this division.

Independent Adviser Group (IAG): IAG delivers consulting resources and services to a select group of independent consulting firms and financial intermediaries. We give IAG clients the tools to provide fiduciaries, trustees, and high-net-worth individuals with objective investment solutions that were previously available to only the largest of institutions. These solutions include strategic planning, plan implementation, monitoring and evaluation, and continuing education.

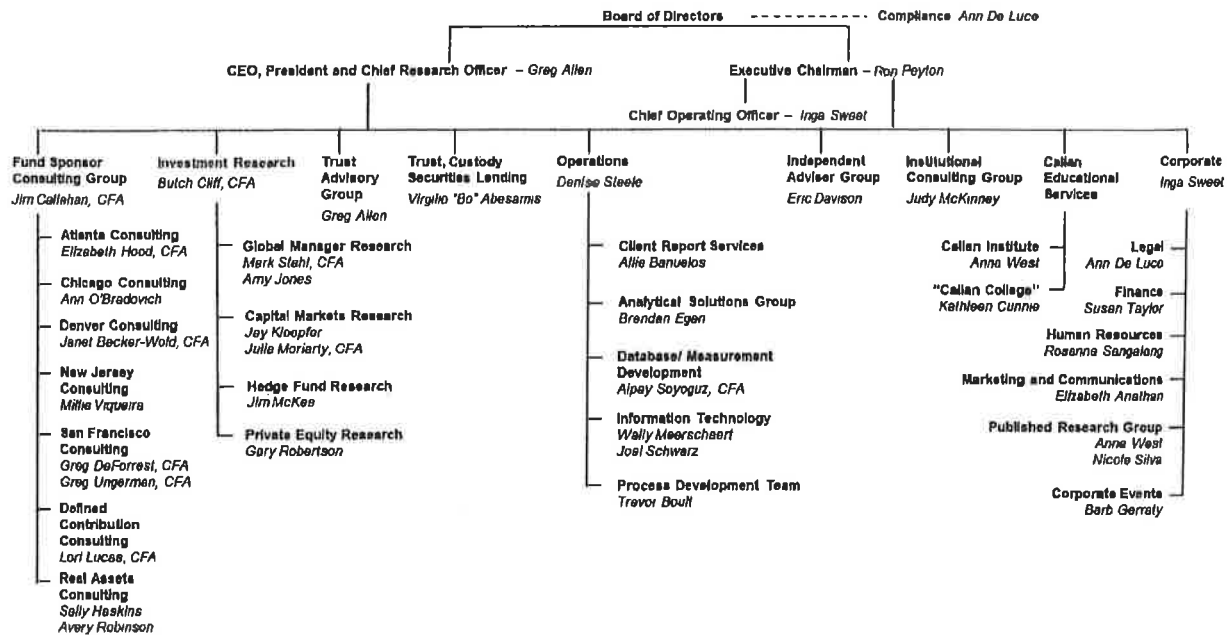
Institutional Consulting Group (ICG): ICG provides investment manager clients with research, education, performance measurement, and database and analytical tools that help them better serve the needs of institutional investors. Our ICG team lends critical insight to the investment management and product issues confronting many clients today.

Trust Advisory Group (TAG): TAG is our asset management and implemented consulting division. It specializes in the design, implementation, and ongoing management of multi-manager and discretionary portfolios for institutional investors. TAG applies a process-driven approach to building efficient, low-cost portfolios with clearly articulated goals and objectives. It serves as the sponsor and advisor to multi-manager small cap and micro cap value funds, as well as the non-discretionary advisor to a series of target date funds known as Callan GlidePath® Funds. TAG also serves as the discretionary advisor for several outsourced CIO clients.

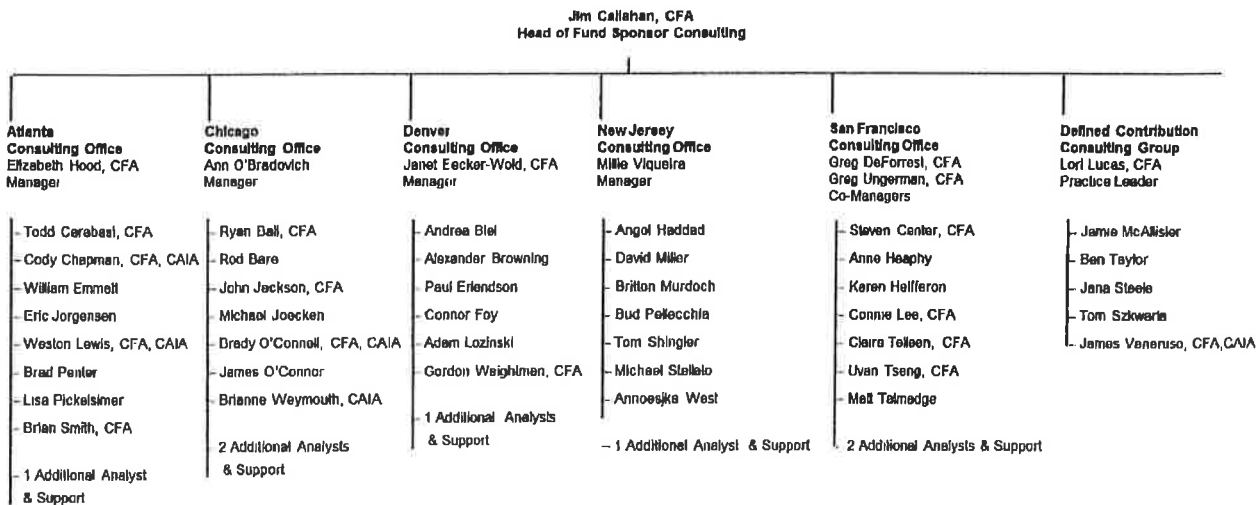
A chart of our organization is included on the following page.

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Below is a chart of our Fund Sponsor Consulting group.



SEWERAGE AND WATER BOARD OF NEW ORLEANS

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3. List the percentage of total firm revenues derived from investment consulting services for the five most recent fiscal years and projection for the current year.

Fund Sponsor Consulting Revenue as % of Total					
2012	2013	2014	2015	2016	2017 Projection
69%	68%	67%	64%	65%	65%

4. Complete the following table:

Client Profile							
	Public Pensions	Corporate Pensions	Taft Hartley Plans	Endowments & Foundations	Family Offices	Other	Total
Assets (\$millions)	\$1,420,907	\$184,797	\$7,835	\$32,672	\$13,821	\$553,391	\$2,213,423
# of Clients	65	57	8	49	8	217	404

B. Describe your firm's resources for conducting asset-liability studies.

Our Capital Markets Research Group is responsible for conducting all asset-liability studies. This seven-person team comprises seasoned professionals with backgrounds in finance, accounting, investments, actuarial science, economics and statistics. The CMR team averages 26 years of industry experience, with more than 15 years at Callan. Each group member is an expert at articulating complicated analysis in very practical terms.

We also subject every study to formal oversight review by our Client Policy Review Committee. This committee, comprised of senior level consultants and specialists, reviews all strategic planning studies. In addition to providing necessary oversight, the Committee brings valuable experience to bear on each study. Weston Lewis, one of the proposed team members for our relationship with S&WB, is a member of our Client Policy Review Committee.

1. List the members of your asset-liability team and provide brief biographies, including education, professional designations, professional experience, and tenure with your organization.

Biographies for our Capital Markets Research Group are listed below.

Jay V. Kloepper is an Executive Vice President and the Director of Capital Markets Research. The Capital Markets Research group helps Callan's fund sponsor clients with their strategic planning, conducting asset allocation and asset-liability studies, developing optimal investment manager structures, evaluating defined contribution plan investment lineups and providing custom research on a variety of investment topics.

Jay is the author of the "Callan Periodic Table of Investment Returns," which he created in 1999. He is a member of Callan's Management and Institute Advisory Committees and is a shareholder of the firm.

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Prior to joining Callan, Jay was a Senior Economist and the Western Regional Manager for Standard & Poor's DRI. Jay earned an MA in Economics from Stanford and a BS with honors in Economics from the University of Oregon.

Jason L. Ellement, FSA, CFA, MAAA, is a Senior Vice President and a consultant in the Capital Markets Research group. He is responsible for assisting plan sponsor clients with strategic planning, conducting asset-liability studies, developing optimal investment manager structures, and providing custom research on a variety of investment topics. Jason is a regular instructor at the "Callan College" and a shareholder of the firm.

Jason joined Callan in 2002 and has over 23 years of experience in the pensions and investments industry. Prior to joining Callan, Jason practiced as a pension actuary for a prominent public retirement system and an international consulting firm.

Jason is a Fellow of the Society of Actuaries and a member of the Academy of Actuaries. He earned the right to use the Chartered Financial Analyst designation and is a member of the CFA Society of San Francisco. Jason graduated with First Class Honors from the University of Manitoba, Canada with a BSc in Actuarial Science & Statistics.

Karen M. Harris, ASA, CFA, is a Senior Vice President and a consultant in the Capital Markets Research group. Karen joined Callan in May 2000. She is responsible for assisting clients with their strategic investment planning, conducting asset allocation studies, developing optimal investment manager structures, and providing custom research on a variety of investment topics. She consults to a wide range of asset pools, including defined benefit plans – corporate and public, endowments, hospitals, and insurance companies in areas such as workers comp, health care and casualty. Karen is also an instructor at the "Callan College" and has spoken frequently at the Callan Investments Institute. She is a shareholder of the firm.

Prior to joining the firm, she spent eight years as a consultant with Watson Wyatt Worldwide, an employee benefits consulting firm. Her duties included consulting to plan sponsor clients on pension plan design, funding, accounting, regulatory, and investment issues. She also spent four years in Jakarta assisting the Indonesian government to develop and implement a private employer pension law.

Karen has earned the designation of Associate of the Society of Actuaries (ASA) and earned the right to use the Chartered Financial Analyst designation. Karen has a Bachelor of Mathematics from the University of Waterloo in Ontario, Canada.

Julia A. Moriarty, CFA, is a Senior Vice President and Co-Manager of Callan's Capital Markets Research group. The Capital Markets group helps Callan's fund sponsor clients with their strategic planning, conducting asset-liability studies, developing optimal investment manager structures, and providing custom research on a variety of investment topics. The group consults to a wide range of clients, including defined benefit and defined contribution employee-benefit plans (corporate, public, and Taft-Hartley), endowments, foundations, insurance, hospitals, health-care systems, and nuclear decommissioning trusts. Julia also conducts target date and diversified real return manager research and publishes Callan's annual Nuclear Decommissioning Funding Study. Julia is a shareholder of the firm and is a member of Callan's Management Committee.

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Julia earned an MBA from the University of California at Berkeley's Haas School of Business and a BS in Finance from California Polytechnic State University at San Luis Obispo. She earned the right to use the Chartered Financial Analyst designation and is a member of the CFA Society of San Francisco and CFA Institute.

John Pirone, CFA, FRM, CAIA, is a Senior Vice President and a consultant in the Capital Markets Research group. He is responsible for assisting clients with their strategic investment planning, conducting asset allocation studies, developing optimal investment manager structures, and providing custom research on a variety of investment topics. John is a member of Callan's Alternatives Review Committee.

Prior to joining Callan in 2015, John was a Managing Director at BlackRock in the Client Solutions Group, advising major institutional clients throughout the Americas on total portfolio strategy issues.

From 1997 to 2009, John was a Client Advisory Strategist at Barclays Global Investors. Previously, he was a Fixed Income Analyst at Gifford Fong Associates.

John is co-author of "Optimizing Manager Structure and Budgeting Manager Risk" which received the Bernstein Fabozzi/Jacobs Levy award from The Journal of Portfolio Management.

John earned a MSc in Finance from the London Business School, a MA in Economics from the University of California at Santa Barbara and a BA in Biology from Washington University in St. Louis. He earned the right to use the Chartered Financial Analyst, Financial Risk Manager and Chartered Alternative Investment Analyst designations and is a member of the CFA Society of San Francisco and CFA Institute.

Eugene L. Podkaminer, CFA, is a Senior Vice President and a consultant in the Capital Markets Research group. Eugene is responsible for assisting clients with their strategic investment planning, conducting asset allocation studies, developing optimal investment manager structures, and providing custom research on a variety of investment topics. Eugene is a member of Callan's Institute Advisory Committee and is a shareholder of the firm.

Prior to joining Callan in 2010 Eugene spent nearly a decade with Barclays Global Investors. As a Senior Strategist in the Client Advisory Group he advised some of the world's largest and most sophisticated pension plans, non-profits, and sovereign wealth funds in the areas of strategic asset allocation, liability driven investing, manager structure optimization, and risk budgeting. As Chief Strategist of Barclays' CIO-outsourcing platform Eugene executed CIO-level functions for corporate pension plans and endowments. Eugene was also a Senior Investment Consultant with Alan Biller and Associates.

Eugene received a BA in Economics from the University of San Francisco and an MBA from Yale University. He earned the right to use the Chartered Financial Analyst designation and is a member of the CFA Society of San Francisco and CFA Institute, where he consults on curriculum development. He is a frequent speaker on investment related topics and has been featured in numerous publications; in 2014 he was named CIO Magazine's "Consultant of the Year". His paper on risk premia investing, "Risk Factors as Building Blocks for Portfolio Diversification: The Chemistry of Asset Allocation," was published by the CFA Institute and his

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article on smart beta, "The Education of Beta: Can Alternative Indices Make Your Portfolio Smarter," was featured in the Journal of Investing, and "Smart Beta is the Gateway Drug to Risk Factor Investing" appears in the Journal of Portfolio Management.

James W. Van Heuit is a Senior Vice President and a consultant in the Capital Markets Research group. He is responsible for assisting clients with their strategic investment planning, conducting asset allocation studies, developing optimal investment manager structures, and providing custom research on a variety of investment topics. Jim speaks regularly at both the "Callan College" and the Callan Institute. Jim is a shareholder of the firm.

Jim was originally with Callan in the Capital Markets Research group from 1989 to 1997 and returned in 2001. From 2001 through 2004, he was a general consultant in the San Francisco office. From 1997 to 2001 Jim was with consulting firms Watson Wyatt and R.V. Kuhns.

Prior to joining Callan in 1989, Jim participated in the Ph.D. program in Economics at the University of Michigan where he studied microeconomics and international economics. Jim's previous experience includes four years as an independent consulting engineer and two years as a design engineer for Ford Aerospace and Communications Corp.

He earned an MA in Economics from the University of Michigan and received a BA in Economics from California State University at Sacramento. He also earned a BS in Mechanical/Aeronautical Engineering from the University of California.

In addition to our Capital Markets Research Group listed above, Cody Chapman and Weston Lewis from our Fund Sponsor Consulting group will serve as liaisons to the relationship with S&WB.

2. Please translate the team biographies into the table below:

Asset-Liability Team Summary							
Name	Title	Bachelor's Degree	Master's Degree	Advanced Degree	Professional Designation	Professional Experience	Firm Tenure
Jay Kloepfer	Executive Vice President	BS	MA	-	-	30 yrs	19 yrs
Jason Ellement	Senior Vice President	BSc	-	-	FSA, CFA, MAAA	23 yrs	15 yrs
Karen Harris	Senior Vice President	BS	-	-	ASA, CFA	29 yrs	17 yrs
Julia Moriarty	Senior Vice President	BS	MBA	-	CFA	27 yrs	27 yrs
John Pirone	Senior Vice President	BA	MA, MSc	-	CFA, FRM, CAIA	21 yrs	2 yrs
Eugene Podkaminer	Senior Vice President	BA	MBA	-	CFA	18 yrs	7 yrs
Jim Van Heuit	Senior Vice President	BA, BS	MA	-	-	36 yrs	24 yrs

C. Describe your experience performing asset-liability studies for pension plans in general and specifically:

Callan has been conducting asset-liability studies since the inception of our firm. Callan's proprietary asset allocation/liability modeling capabilities originated in the late 1970s and have been continually enhanced. We have worked with a variety of client types through a myriad of market environments. Each of these diverse client experiences has enriched our knowledge, and after four-plus decades, it is safe to say there is little we haven't seen. Our Capital Markets Research team, the group responsible for conducting asset-liability studies, averages 26 years of industry experience and more than 15 years at Callan.

1. How many studies have you performed on average per year?

Since 2008, we have averaged 21 asset-liability studies completed each year.

2. How many total studies have you cumulatively performed?

Since 2008, we have completed 196 asset-liability studies.

3. How many studies have been for pensions smaller than \$500 million in assets?

We have completed a number of asset-liability studies for mid-sized pension plans. Since 12/31/2013, we have completed 23 asset-liability studies for pension plans smaller than \$500 million in assets.

4. What is your experience in performing asset-liability studies for "closed [to new entrants]" and "frozen" pension plans?

Callan has worked with many pension plans that are closed to new participants and in several instances accruals to existing participants were frozen, imposing a finite maturity on the liabilities. In all cases, the plans retained fixed rates to discount the liabilities, which limits the interest rate sensitivity of the liabilities and changes the focus of a liability driven investing solution from one of matching asset interest rate sensitivity to the liabilities to a strategy of limiting the volatility of the asset portfolio around a target return. As a result, we typically focus on mitigating portfolio risk through diversification and a focus on risk aware strategies, both within asset classes such as equity and fixed income, and with the addition of diversifying strategies to dampen the volatility from raw market beta, including hedge funds, multi-asset class absolute return strategies, and where appropriate, private market investments, including real assets. Unless the plan is willing to reduce the discount rate as the liabilities mature, taking exposure to growth assets off the table and therefore reducing expected return can be problematic for many of these public fund sponsors.

5. Please provide three references from clients (past or present) for whom you conducted an asset-liability study. Include contact name, contact's title, organization's name, phone number, and e-mail address.

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References				
Contact Name	Title	Organization	Phone	Email
Johnna Morris	Director of Finance	Fort Pierce Retirement & Benefits System	(772) 460-2200	jmorris@city-ftpierce.com
Paul Wright	Interim Clerk of the Pension, Employee Services Manager	DeKalb County Georgia	(404) 371-2296	pcwright@dekalbcountyga.gov
Paula Henry	Financial Analyst	Entergy Corporation	(504) 576-7428	phenry@entergy.com

D. Describe your overall asset-liability study process.

Our asset-liability process is outlined in the questions below.

1. Describe your process.

At the outset of our process we address the following questions:

- What are the client's specific investment objectives?
- What are the client's long-term assumptions of return, risk, and correlation for broad asset classes?
- What is the client's risk tolerance?
- What practical implementation issues are at hand? (These might include size of the asset pool; the investment sophistication of the staff and committee; the client's investment philosophy, preferences, and biases; liquidity needs, legislative or regulatory issues; and custodial capabilities.)

Once these inputs are articulated, we embark with the client on a five-step journey as we collaborate on their asset allocation strategy:

Step One:

We establish the capital market expectations for each broad asset class under consideration. All of the projections are for five- and ten-year time horizons. We use this period because it is long enough to cover most market cycles. Callan integrates information on past capital market performance, key economic indicators, and the market insights of Callan professionals to develop projections that are sound, defensible, and consistent with financial theory for each asset class. We review these with the client to ensure comfort with the methodology and resulting assumptions. The end product of Step One is a description of the range of investment results that might realistically be expected to occur, from the best to the worst case.

Callan's capital market projections for the 2017 to 2026 timeframe are shown in the following table.

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Asset Class	Index	PROJECTED RETURN			PROJECTED RISK	
		1-Year Arithmetic	10-Year Geometric*	Real	Standard Deviation	Projected Yield
Equities						
Broad Domestic Equity	Russell 3000	8.30%	6.85%	4.60%	18.25%	2.00%
Large Cap	S&P 500	8.05%	6.75%	4.50%	17.40%	2.10%
Small/Mid Cap	Russell 2500	9.30%	7.00%	4.75%	22.60%	1.55%
Global ex-US Equity	MSCI ACWI ex USA	8.95%	7.00%	4.75%	21.00%	3.10%
International Equity	MSCI World ex USA	8.45%	6.75%	4.50%	19.70%	3.25%
Emerging Markets Equity	MSCI Emerging Markets	10.50%	7.00%	4.75%	27.45%	2.65%
Fixed Income						
Short Duration	Bloomberg Barclays 1-3 Yr G/C	2.60%	2.60%	0.35%	2.10%	2.85%
Domestic Fixed	Bloomberg Barclays Aggregate	3.05%	3.00%	0.75%	3.75%	3.50%
Long Duration	Bloomberg Barclays Long G/C	3.75%	3.20%	0.85%	10.90%	4.60%
TIPS	Bloomberg Barclays TIPS	3.10%	3.00%	0.75%	6.25%	3.35%
High Yield	Bloomberg Barclays High Yield	5.20%	4.75%	2.50%	10.35%	7.75%
Non-US Fixed	Bloomberg Barclays Gbl Agg xUSD	1.80%	1.40%	-0.85%	9.20%	2.50%
Emerging Market Debt	EMBI Global Diversified	4.85%	4.00%	2.25%	9.60%	5.75%
Other						
Real Estate	Callan Real Estate Database	6.90%	5.75%	3.50%	16.35%	4.75%
Private Equity	TR Post Venture Capital	12.45%	7.35%	6.10%	32.90%	0.00%
Hedge Funds	Callan Hedge Fof Database	5.35%	5.05%	2.80%	9.15%	2.25%
Commodities	Bloomberg Commodity	4.25%	2.65%	0.40%	18.30%	2.25%
Cash Equivalents	90-Day T-Bill	2.25%	2.25%	0.00%	0.00%	2.25%
Inflation	CPI-U		2.25%		1.50%	

* Geometric returns are derived from arithmetic returns and the associated risk (standard deviation)

Step Two:

Capital market assumptions are used to develop a range of "efficient" portfolio asset mixes. The selected asset classes are combined into Callan's optimization process to determine the most efficient portfolios. Policy and/or legal restrictions are incorporated into the analysis.

For this step, our Capital Markets Research group uses proprietary models for fixed income, equities, and the projection of economic variables. The group is able to leverage Callan's large stable of specialists for knowledge on asset classes that are difficult to model like real assets, hedge funds, and private equity. The end value to the client is a series of credible projections that feature enduring solutions and are free of investment fads.

Step Three:

We conduct a comprehensive analysis of the plan's liabilities and the future financial status of the program. We develop an actuarial model of the plan today, as well as projections of its liabilities five and ten years in the future.

A thorough understanding of liabilities is a key component in determining an appropriate asset allocation strategy. This strategy can be tailored to reflect the nature of the liabilities and their sensitivity to capital market uncertainty. Factors to consider include the amount and timing of future cash flows; the methodology for calculating liabilities; and the expected (and unexpected) growth rate of the liabilities and cash flows.

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This liability model is then integrated with the asset allocation model in a simulation exercise that examines the fund's potential financial condition five and ten years in the future over a range of economic scenarios.

Step Four:

Using a liability-driven approach, we simulate thousands of possible future capital market outcomes and observe the interaction of assets and liabilities across all potential scenarios.

By simulating thousands of potential capital market outcomes and observing the interaction of assets and liabilities across all of these scenarios, we can begin to understand the effect that each asset mix might have on a fund's future and the sponsor entity.

Step Five:

Every strategic planning project undertaken for a Callan client is a collective effort involving the client, general consultant, a team of specialists, and ultimately a peer review committee. We subject every study to formal oversight review by our Client Policy Review Committee (CPRC). In addition to providing necessary oversight, the CPRC brings valuable experience to bear on each study lending a qualitative overlay to the quantitative approach enabling our clients to benefit from the collective wisdom of the firm.

The CPRC, which is comprised of 13 senior consultants, evaluates all reports before they are submitted to the client. This environment of complete transparency requires a thoroughly documented process that is free of unsupported personal opinions and biases. CPRC calls are open to all Callan employees via conference call enabling them to attend and ask questions.

The Final Challenge:

Once all of the aforementioned has been accomplished, the final challenge is to distill these inputs into meaningful information that can be used to support an asset allocation decision. Working together, we will ultimately design a document that most directly addresses our clients' specific concerns. The focus of the document will be to distill the large amount of data from this complex process into meaningful, defensible policy recommendations. The result will be a blueprint for fund management at both the broad asset class level, as well as the individual manager level.

It is in this final phase that Callan is particularly distinct. Our team is the greatest resource that we can bring to bear for our clients. While other firms may similarly provide assistance with structure studies and investment policies, our group is singular in its ability to absorb these inputs and collaborate with the client to make sound judgments on the construction of an investment strategy that stands the test of time. This strategy is supported by a process that prevents emotion, political cycles, and market volatility from overwhelming financial decisions – all while being customized to the client's specific objectives.

2. What information/time do you need from the client to complete the study?

We will work closely with your actuary to accurately portray the present actuarial valuation model and to project expected liability levels. It has been our experience that actuaries have this "valuation data set" ready to go and that providing this data is neither a particular burden to the actuary nor a large cost to the sponsor.

Typically a study takes between 10 to 12 weeks from when we receive the liability data, provided that it is received in a timely manner.

3. What do you consider to be the advantages and limitations of your process?

How is Callan's method for conducting asset-liability studies different from our competitors? Simply put, the answer is: people, philosophy, and process.

People

Our asset-liability modeling is conducted by our dedicated Capital Markets Research (CMR) Group. This team averages 26 years of industry experience, and more than 15 years at Callan. Each group member is an expert at articulating complicated analysis in very practical terms. This allows our clients to make informed decisions with confidence, while arriving at a plan that is durable, timeless, and can endure changes to the board and staff.

CMR's primary focus is on strategic planning, which incorporates capital market expectations, asset allocation, and manager structure. This group has a long history working with public funds – assessing their objectives and simulating their performance within the context of countless market environments.

CMR's goal for each client engagement is to arrive at the creation and adoption of a strategic, long-term asset allocation that will meet the future funding needs of the plan without creating distress on the contribution side.

We provide our clients access to knowledgeable, experienced investment professional to help them with each phase of the asset-liability process. From our perspective, this leads to an intimate awareness of our clients' concerns and objectives.

Philosophy

Callan maintains a series of baseline investment philosophies that are fundamental to all of our consultation.

The following beliefs are core to the advice we provide to public funds:

- *Focus on the ultimate purpose of the assets:* Every institutional investor faces a different set of circumstances. Developing a clear understanding of the goals and objectives for the asset pool, informed by the obligations or associated liability structure, is the starting point for developing an appropriate asset allocation
- *Invest for the long term:* We recommend a planning cycle of five to ten years and develop capital market expectations that look out over a ten year time horizon.
- *Incorporate diversification:* Diversification is a potent tool in controlling risk and curbing the effects of cyclicity.
- *Rely on proven investments:* Callan's strong conviction is that a reliance on proven investments is essential to building portfolios and reaching long-term goals.

Process

We believe the development of an appropriate asset allocation policy for a public fund requires the integration of a number of factors. We address the following questions at the outset of our process:

- What are the client's specific investment objectives?
- What are the client's long-term assumptions of return, risk, and correlation for broad asset classes?
- What is the client's risk tolerance?
- What practical implementation issues are at hand? (These might include size of the asset pool; the investment sophistication of the staff and committee; the client's investment philosophy, preferences, and biases; liquidity needs, legislative or regulatory issues; and custodial capabilities.)

In terms of areas of improvement, our customized approach to each client requires greater resources and therefore a more significant time commitment to evaluate each client's specific circumstances and develop appropriate recommendations. This process takes time, which could be perceived as a weakness by clients looking for a quick answer. However, we strive to respond to our client's requests with urgency.

4. How has your process evolved over the years?

After 2008, we observed that our range of simulated scenarios encapsulated a 2008 event but at the 99.5th percentile. In other words, 2008 was a very bad year yet very unlikely to repeat anytime soon. Prior to 2008 we defined a worst case scenario as a 95th percentile event. While we believe that a repeat of the 2008 credit crisis or something similar is highly unlikely, we have begun to analyze and communicate results that are deeper in the tail such as a 97.5th percentile outcome.

Finally, we have also begun supplementing our simulation analysis with scenario testing to "shock-test" the portfolio against possible economic climates. The pre-defined scenarios typically represent low probability events – very high inflationary environment, a Japan-esque deflationary spiral, and a prolonged period of stagflation – that fall somewhere in the tail of the simulated distribution of results.

5. What are the most recent enhancements to your model and/or process?

While the fundamental methodology used to develop strategic policy recommendations (which employs mean-variance optimization and Monte Carlo simulation) has not changed, recent market events have caused us to place greater emphasis on examining the reaction of different asset allocation policies to specific extreme market outcomes. In particular we have placed an increasing emphasis on examining "flight-to-quality" outcomes (where correlations of financial assets increase dramatically), high and rapidly rising inflation outcomes, and high or rapidly rising interest rate outcomes. This approach allows clients to evaluate the relative costs and benefits of building complete or partial hedges into their policy portfolios to protect against specific market outcomes that may adversely affect their funded status or ultimately their viability.

In addition to examining outcome-specific hedging strategies, we are increasingly being asked to evaluate dynamic asset allocation approaches where the level of risk in the policy portfolio varies through time in reaction to achieving specific funding targets based on the liabilities. There is an increasing appetite to

consider policies that explicitly de-risk the portfolio as the funded status improves. Our Monte Carlo asset-liability simulation framework is particularly well-suited to evaluating these policies across the full range of potential capital market outcomes.

E. Describe the timeline to complete a typical asset-liability study.

Below is the typical timeline of our asset-liability process. As mentioned previously, this process typically takes between 10 to 12 weeks to complete after receiving the data.

1. Request data from actuary (Callan, with assistance from client)
2. Establish risk and return assumptions for capital markets and determine which asset classes will be included in modeling (Callan and client)
3. Initiate discussion of the end game and investment goals for plan (Callan and client)
4. Begin modeling optimal asset allocation mixes (Callan)
5. Receive data from actuary and begin loading actuarial data into software (Callan with assistance from actuary)
6. Build actuarial liability model (Callan)
7. Integrate asset mix projections with actuarial model of the Plan (Callan)
8. Present initial findings of asset-liability study (Callan and client)
9. Rewrite investment policy statement to include new targets and rebalancing ranges (Callan)
10. Implement changes to investment policy (Client)

Callan will be in contact with the client and actuary throughout the entire process, and will adjust the timing of the process based on client needs/preferences.

1. What are the major factors that affect your ability to complete the process according to schedule?

We believe that receiving the data in a timely manner, the level of complexity, and the communication level with the actuary are critical factors to completing the study according to schedule. We have several points of contact with the actuary:

- **Data Request:** Callan will request data from the actuary as the basis of the liability portion of the asset-liability study.
- **Valuation Match:** Callan will work with the actuary so that the initial liabilities modeled in the Callan study will be consistent with the actuarial valuation. There will be no discrepancies between our report and the valuation to be resolved by staff or the Board.

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Projection Verification: Callan will work with the actuary to match the actuary's projections of future liabilities to the extent that they are available. When projections are not available from the actuary we will have the actuary review our projections. Again, any differences with the actuary will be resolved before the study is presented to the client.

Callan has professional actuaries on staff to review data, model liabilities, and consult with the client's actuary on a peer-to-peer basis. Using our own actuaries streamlines the communication process with the client's actuary saving the client time and money.

Callan has extensive experience interacting with actuaries in the course of completing asset-liability studies. We have worked with all of the actuarial consulting firms with a national presence as well as smaller boutique firms that focus on specific regions of the country.

Throughout the asset-liability study we will maintain effective, clear and professional communications with the actuary.

F. Describe your asset allocation models.

Our clients entrust us with the enormous responsibility of helping them meet their obligations. We honor this trust by employing a long-term focus, leaning on established investment theory, and relying on proven institutional-quality investments.

Five beliefs are core to the way we service institutional clients:

1. Focus on the ultimate purpose of the assets;
2. Invest for the long term by using a planning cycle of five to ten years;
3. Incorporate diversification across asset classes;
4. Strategically add value through active management;
5. Rely on institutional-quality investments;

Callan uses a combination of proprietary tools and external models to conduct our asset allocation client work. Managing these capabilities ourselves affords us levels of control and accuracy that are impossible to preserve when a company solely utilizes outsourced solutions. Our clients benefit because we are able to reinvest in our resources and proprietary evaluation tools, and do not have to compromise our advice based on the priorities of outside shareholders.

The theory and methodology behind our tools and models include:

Capital Market Projections

We develop long-term projections for capital market performance at the start of each year. These projections are for a 10-year time period, as this timeframe is long enough to cover most market cycles.

We integrate information on past capital market performance, key economic indicators, and the market insights of Callan professionals to develop projections that are sound and defensible.

Our projections consist of forecasted returns and standard deviations for each asset class and correlations between asset classes.

Mean-Variance Optimization

We use our capital market expectations to construct "optimal" strategic asset mixes i.e. asset mixes that generate the maximum expected return for a given level of risk. We use our proprietary optimization model to create the optimal asset mixes.

We look across the range of optimal asset mixes (the "efficient frontier") to identify mixes that could potentially improve upon the existing target asset allocation. The range we evaluate generally includes more conservative mixes which emphasize greater levels of capital preservation, a mix with the same expected return as the existing target if the existing target is not optimal, and more aggressive mixes which focus on higher levels of capital appreciation.

Monte Carlo Simulation

We use Monte Carlo simulation to evaluate the expected behavior of each of the efficient mixes in the context of the Fund's future assets and liabilities. By simulating thousands of possible future capital market outcomes and observing the interaction of assets and liabilities across all of these potential scenarios, we can begin to understand the effect that each asset mix might have on the future of the plan.

The plan's actuarial information is combined with the range of potential outcomes across the current and alternative asset mixes to evaluate the projected financial condition of the Fund over several time horizons (typically five, and ten years) and across various capital market scenarios.

1. Describe how you forecast capital market inputs for the asset allocation models.

Our capital market expectations are developed internally by Callan's Capital Markets Research group. Capital Markets Research characterizes the expected performance of the major asset classes over a five- to 10-year period, as this timeframe is long enough to cover most market cycles. These assumptions are reviewed on an ongoing basis and are updated annually.

Our projections consist of forecasted return, yield, and standard deviation (of returns) for each asset class, as well as projected correlations between asset class returns. We employ standard indices to represent each asset class.

There are four distinct steps we use to create our capital market projections:

1. **Develop medium and long-term economic outlooks for the U.S. and other major industrial economies.** This is a blend of science and art, as it incorporates objective and subjective inputs. When developing expectations about future performance of an asset class, it is important to understand the major factors influencing its variations, including inflation, interest rates, and growth and profitability. Callan's economic outlook is derived from a combination of in-house empirical models and consensus forecasts from the business economics industry.
2. **Examine historical relationships between key economic variables and asset class performance patterns.** This step includes the development and maintenance of empirical models which embody these relationships. A different group of empirical models is used for this step. These models have been specifically designed to link projections of important economic variables to the medium-term asset performance characteristics that will be used in the portfolio optimization procedures.

It may seem that we are constrained to thinking that history will repeat itself when using statistical models to characterize the past and forecast the future. By modeling underlying relationships in economic and financial markets, we are able to bring historical relationships between variables (independent of the situation) to bear on a scenario that is different from any encountered before.

3. **Create comprehensive asset class performance projections by blending descriptive asset class characteristics with the capital market insight and economic analyses developed in Steps 1 and 2.** The third step in our process is to create five- to ten-year performance projections that include total annualized returns, annualized standard deviation of returns, and correlation of asset class returns. The object of these return projections is not to try to pinpoint the exact return for each asset class, but to estimate a central point around which future returns are likely to fall.
4. **Test performance projections for reasonable results with an optimization model and fine tune preliminary estimates when necessary.** The final step in our process involves fine-tuning these preliminary estimates within specified ranges so that they behave rationally in a standard optimization environment. This step is an iterative process where preliminary return, risk, and correlation values are chosen for each asset class and entered into the optimization program. The resulting optimal portfolios are subjected to a careful examination to determine:
 - No asset class is under- or over-weighted in any of the optimal portfolios for multiple levels of risk, including standard deviation, liquidity, and other implementation considerations.
 - There is continuity moving from safer to riskier portfolios, so that a small movement along the efficient frontier does not cause a large change in the portfolio weightings.
 - Return, risk, and correlation values are adjusted on the basis of this analysis until reasonable portfolios are produced.

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By using this four-stage process, we are able to develop values that A) are consistent with historical, economic, and financial market behavior; B) incorporate important information about the projected capital market environment; and C) behave well in a standard optimization environment.

2. List the asset classes, sub-asset classes or strategies for which your forecast returns.

	Asset Class	Benchmark
Equities	Broad Domestic	Russell 3000
	Large Cap	S&P 500
	Small/Mid Cap	Russell 2500
	International	MSCI EAFE
	Emerging Markets	MSCI EM
	Global ex-U.S.	MSCI ACWI ex-U.S.
Fixed Income	Domestic	Bloomberg Barclays Aggregate
	Long Duration	Bloomberg Barclays Long Gov't/Credit
	Defensive	Bloomberg Barclays Gov't/Credit 1-3 Year
	TIPS	Bloomberg Barclays TIPS
	High Yield	Bloomberg Barclays High Yield
	Non-U.S.\$	Bloomberg Barclays Global Aggregate ex-U.S.
	Emerging Mkt. Debt	JPM EMBI Global Diversified
Other	Real Estate	Callan Total Real Estate Database
	Private Equity	Venture Economics Post-Venture Capital
	Absolute Return	Callan Hedge Fund-of-Fund Database
	Commodities	Bloomberg Commodity
	Cash Equivalents	90-Day U.S. Treasury Bill
	Inflation	CPI - All Urban Consumers

The benchmarks above are investable (for the most part), measurable and representative of the markets they cover. In addition, we can and have modeled more specialized strategies (i.e. natural resources, infrastructure, etc.) as requested/needed by our clients.

3. Do you use mean-variance analysis?

Yes, we use our capital market expectations to construct "optimal" strategic asset mixes i.e. asset mixes that generate the maximum expected return for a given level of risk. We use our proprietary optimization model to create the optimal asset mixes.

We look across the range of optimal asset mixes (the "efficient frontier") to identify mixes that could potentially improve upon the existing target asset allocation. The range we evaluate generally includes more conservative mixes which emphasize greater levels of capital preservation, a mix with the same expected

return as the existing target if the existing target is not optimal, and more aggressive mixes which focus on higher levels of capital appreciation.

4. Do you use multi-moment optimization?

We assume a normal distribution for optimization purposes and only use the first and second moments. The motivation for not using higher moments is that we do not believe that we can properly parameterize given the data available for three reasons. First, non-symmetrical distributions are often developed in the context of a regime switching environment. The data available (especially for newer asset classes such as emerging markets) are too limited to estimate parameters for these distributions with confidence. Second, in the course of parameterizing expectations it is difficult to maintain the convexity of the set of potential outcomes. In the absence of convexity the optimization process can terminate at local risk minimums for a targeted return that may not be global risk minimums. Finally, from a practical standpoint optimization is essentially a way to maximize diversification. The additional information introduced by higher moments is both limited and uncertain.

5. Have you developed proprietary in-house models or do you use a vendor's product? Please explain your choice.

We use both proprietary and in-house models. We have optimization and simulation models that have been developed in house, but we primarily use ProVal for performing asset-liability studies. While we do dozens of these studies every year that is still insufficient revenue to justify developing and maintaining a model for defined benefit pension plans. ProVal is a sophisticated model that the vendor continuously updates to stay current with pension rules and requirements. In addition, actuarial firms often use ProVal to perform valuations which potentially allows us to use some or all of the files they have created for the valuation on our asset-liability study.

6. Can you incorporate dynamic asset allocation into the asset-liability study? Have you done so in the past? Describe a study or studies where in you incorporated dynamic asset allocation in an asset-liability study.

We can do dynamic asset allocation in two ways. First, we can change the allocation from year to year over the projection period of the asset-liability study. Second, portfolios are automatically rebalanced to a target asset allocation at the beginning of each year of the study. This has the effect of "buying low and selling high" which is a form of dynamic asset allocation.

Our models do not allow us to change the asset allocation based on parameters such as simulated returns or valuation data. We do not view this as a limitation because we believe that dynamic asset allocation is challenging to implement successfully thus clients are better served by sticking with long-term strategic allocations. To the extent that clients would like to pursue dynamic asset allocation we recommend that they implement it using tactical managers measured against static target allocations.

G. Describe your liability modeling.

Callan has been leasing a well-known actuarial/forecasting software application called ProVal from Winklevoss Technologies for over 15 years. ProVal is used by several major global employee benefits consulting firms as its sole platform for delivering actuarial valuations. This wide distribution ensures that it is fully capable of handling virtually any plan's benefit formulas and actuarial assumptions, no matter how complex. ProVal is considered the industry standard for forecasting and ALM work within the investment consultant and pension actuarial communities. Furthermore, ProVal was primarily built as a forecasting tool and enables users to employ Monte Carlo simulation for projections of inflation, interest rates and asset class returns. ProVal uses Monte Carlo simulation to evaluate the expected behavior of each of the efficient mixes within the context of a fund's future assets and liabilities. By simulating thousands of potential capital market outcomes and observing the interaction of assets and liabilities across all of these scenarios, we can begin to understand the effect that each asset mix might have on a fund's future. ProVal facilitates capital market simulation via a utility that Callan parameterizes each year based on regression analysis and revised ten-year capital market assumptions for risk, return and correlations. We are able to simulate over 20 asset classes along with price inflation, wage inflation, interest rates and credit premiums which drive liabilities. The capital market simulator begins by simulating inflation and one-year U.S. Treasury bill real rates as long-term mean-reverting autoregressive processes. A no-arbitrage stochastic process is applied to bootstrap the rest of the Treasury curve. Curves can vary by shape, steepness and level of rates. Next, a mean-reverting credit spread model is layered on top of the stochastic Treasury curve. Simulated nominal returns on one-year T-bills, 1-year credit bills, 30-year U.S. Treasury bonds and 30-year credit bonds are calculated based on the changes in the appropriate curve. The last step is to parameterize multiple regression equations to the four variables for the Treasury and Credit Curve. Bonds are calibrated to have high correlation to the yield curves while equities will exhibit meaningful correlation only to the credit curve.

H. Have you developed a proprietary in-house model or do you use an outside vendor's product?

As mentioned previously, we use the industry-leading ProVal software for our liability modeling. ProVal possesses all the necessary modeling capabilities and flexibility required to thoroughly analyze our client's pension plan liabilities and asset allocation. ProVal allows us to customize the liability modeling according to our client's specific benefit formulas, funding methods, actuarial assumptions, etc. The ability to customize the liability modeling allows us to age the Fund to produce workable valuations for future years. The ProVal term structure model has been in use for more than ten years and is continually tuned and revised as necessary.

I. How do you model and forecast liquidity?

Analyzing client liabilities, short-and long-term objectives, and policy or regulatory considerations, Callan customizes asset allocation and portfolio structure to their specific needs. As part of this customization, we address liquidity issues through both asset allocation and implementation, including manager structure and rebalancing.

Liquidity analysis gauges the balance between the fund's liquidity needs and its liquidity sources. We test potential portfolios by simulating situations of heightened need for liquidity combined with constricted access to liquidity sources.

Callan's liquidity analysis consists of four steps:

1. Define liquidity needs

For context, let us step back for a moment and explain the foundation of our thinking. A fund will have fewer liquidity needs to pay benefits and rebalance if its time horizon is relatively long. This means the fund does not require the ability to withdraw at any time with reasonable certainty of value. A time horizon starts when the investment portfolio is implemented and ends when funds are removed. This time span is important because it can directly affect the fund's risk tolerance.

We explore each fund individually to understand its liquidity needs, which are a reflection of the size of the fund relative to the sponsor, its maturity, and its funding policy. For example:

- A mature, closed fund with large expected net-cash out-flows relative to assets may have to dedicate a portion of the liquidity needed for annual benefits to short-term securities.
- An open fund with net cash outflows that are less than five percent of fund assets will not likely need to explicitly acknowledge liquidity in the strategic asset allocation policy.

2. Incorporate liabilities

Our asset allocation process incorporates comprehensive models, both quantitative and qualitative. The projections that result provide an assessment of how a portfolio might perform in various economic environments. When integrated with liabilities, this analysis assesses risk factors across both sides of the fund's balance sheet.

We explicitly address liquidity needs by integrating into our analysis a comprehensive model of the fund's liabilities, including expected benefit payments and administration costs. This simulation shows the potential range of liquidity needs, which are important in gauging an appropriate investment time horizon. They are also critical in determining tolerance for higher-returning, higher-risk asset classes, as well as the ability to commit to illiquid investments.

3. Examine manager structure

Manager structure looks at decisions within asset classes, such as the appropriate mixture of active/passive, and the right blend of value/growth. It extends our liquidity analysis and subsequent modeling to potential manager strategies. Manager structure provides the critical link between asset allocation and actual manager selection.

During this process, we take into consideration transition costs and fees for implementing the new structure, which may influence liquidity. If there are new asset classes for the fund, we will explore a

pricing analysis for less liquid areas, alternative vehicles and make clear any additional expenses and resulting liquidity concerns.

On the implementation side, solutions can include holding passive exposures in all major liquid asset classes to ensure benefit payments are made and rebalancing is done without any disruption to active manager strategies. For both the active and passive managers, we evaluate the expected liquidity for each manager and include this evaluation in designing the appropriate combination of managers.

4. Determine rebalancing ranges

Thoughtful, disciplined rebalancing is essential to setting and sticking to a strategic asset allocation and managing cash flow. Over time, rebalancing has generally reduced overall portfolio volatility and increased total return. Optimal rebalancing ranges will depend on the underlying strategic asset allocation. The rebalancing range for a particular asset class will depend on its allocation, volatility, correlation, transaction costs, and the average length of performance cycles.

We periodically evaluate the current allocation against the strategic target, liquidity needs, and the related rebalancing ranges. If the fund's allocation exceeds the strategic ranges, we propose an implementation plan for returning the fund back to the strategic target.

J. Describe your stochastic simulation process.

Using our proprietary Monte Carlo model, we simulate thousands of possible future capital market outcomes and observe the interaction of assets and liabilities across all potential scenarios. Our model uses our own capital market assumptions to proxy asset classes during these simulations. We focus on evaluating the reward, or improvement in expected case versus the risk, defined as the worsening in the worst case outcome, when we look at the potential asset allocation. We initially define the "worst case" as the 95th percentile result, or comparable in concept to a two-standard deviation event. By simulating thousands of potential capital market outcomes and observing the interaction of assets and liabilities across all of these scenarios, we can begin to understand the effect that each asset mix might have on a fund's future and the sponsor entity.

- 1. Do your Monte Carlo simulations use normal distributions or non-normal distributions? If you use normal distributions, how do you account for probability distributions in financial markets that often appear to be heavytailed (i.e., exhibiting skewness or kurtosis)?**

All of our Monte Carlo simulation models assume normal distributions. This is necessary to be consistent with our optimization process which assumes normal distributions. It is also appropriate because of the limited amount of data available to parameterize non-normal distributions. In order to account for return distributions with fat tails we increase the size of the forecast standard deviations. This has the benefit of increasing the probability of more extreme events without having to estimate higher moments.

K. Can your model/process accommodate specific market scenarios such as the 1994 bond market crash, 2000-2002 bear market, or 2007-2009 financial crisis in a specific period (e.g., the next five years)?

Yes, our model can simulate thousands of potential economic scenarios, including those specified above with some caveats. The market crises above occurred in different fixed income interest rate environments, which factors into the how we model a future crisis would unfold. Callan routinely conducts scenario analyses to shed light on possible future outcomes and to better understand various factors that can lead to risk. Typically, we perform scenario analysis via the ProVal software.

1. Describe examples of studies you have conducted in the past that incorporated similar scenarios.

As an example, we recently conducted scenario analysis for a large public pension fund that was underfunded and considering a proposed funding policy to better fund the Plan. Of course, over the long run, a more aggressive asset allocation is expected to improve funded status as well. Risk was evaluated using funded ratio drawdown analysis (i.e. how much the unfunded liability could grow) and the resulting impact on contribution rates. Multiple scenarios were analyzed with the goal of achieving a deep understanding of the impact of capital market risk and return on each factor over a 10-year planning horizon.

L. Describe your experience customizing asset-liability studies for clients.

Callan has been conducting customized asset-liability and asset allocation studies since the inception of our firm. We typically complete 20-25 full asset-liability studies each year and 20-25 asset allocation only studies. Importantly to S&WB, we work with a diverse set of clients on custom asset-liability framework, including a number of public defined benefit plans. Callan's proprietary asset allocation-liability modeling capabilities originated in the late 1970s and have been continually enhanced. These enhancements encompass Callan's state-of-the-art modeling technologies, as well as more than thirty years of experience in asset allocation modeling for major institutional investors.

We maintain a dedicated Capital Markets Consulting specialty group that is responsible for conducting all asset allocation work. This seven-person team comprises seasoned professionals with backgrounds in finance, accounting, investments, actuarial science, economics and statistics. The CMR team averages 26 years of industry experience, with more than 15 years at Callan. Each group member is an expert at articulating complicated analysis in very practical terms.

We also subject every study to formal oversight review by our Client Policy Review Committee. This committee, comprised of senior level consultants and specialists, reviews all strategic planning studies. In addition to providing necessary oversight, the Committee brings valuable experience to bear on each study.

1. Can your model/process evaluate specific scenarios determined by the client? To what extent?

Yes, we are able to run specific scenarios provided by the client. Our process for conducting scenario analysis begins with defining the problem in terms of the time horizon and factors to be assessed like funded ratio or contribution rates. Most factors are known once the problem is defined. For example, current state of

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the economy, capital market uncertainty, funding policy (e.g. changes to contribution rates), regulation, adjustments to active member wages, flexibility to employ actuarial smoothing techniques and the financial ability of the Plan Sponsor to make actuarial contributions among other factors. Some factors are known while others may be highly uncertain.

- 2. Specifically, the S&WB would like to evaluate two main scenarios: (a) defined benefit plan remains open to new entrants and (b) defined benefit plan is closed to new entrants. Can you run these scenarios? Please describe a previous project in which you ran a similar analysis.**

Yes, Callan is able to handle a wide range modeling scenario including the impact of keeping open or closing the plan, freezing the plan, and any changes in benefit levels or funding policy. As an example of a previous project, we recently worked with three large public funds that have added new tiers of benefit levels. What that means is an existing tier of benefits "closes" to new entrants, and those new entrants are directed to a new level of benefits or "open" tier. These studies also included changing future actuarial assumptions and increasing employee contribution rates into the future.

- a. In scenario (b), we would like to estimate the pension costs with an assumed employer contribution for the employees in the defined contribution plan. Could you provide the excluded employee's projected wages for such a purpose?**

Yes, Callan has the flexibility to model this scenario using custom programming to simulate unique funding policy's such as the one described above.

M. What metrics do you provide in the analysis? Please provide an example report output.

The final report provides a number of key metrics for clients including, but not limited to project annualized returns and risk, drawdown, projected market values of assets and liabilities, funded status forecasts, projected contributions, and net costs. A sample asset-liability report for a public plan has been included with our response.

N. The S&WB would like to develop a Statement of Risk Capacity and Risk Appetite. We believe that the asset-liability study will provide information to help articulate the Pension Committee's risk appetite.

- 1. Can you provide probabilities of outcomes to assist in the development of a statement of risk appetite, such as "over the next 5 years, the funded ratio should have less than a __% probability of being lower than __%"? What are the most important statements of probability in the context of an asset-liability study?**

Yes, Callan can provide outcome probabilities for the funded ratio and other variables that can help measure risk appetite. One area to consider is where in the distribution of outcomes is risk defined – should it be 2 standard deviations from the expected case or something higher? The 2008 Great Recession scenario was arguably a 3 or 4 standard deviation event. A second area to consider is the distribution of outcomes, such as defining risk in different economic regimes. Other important statements of probability we have found that

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resonate included the impact on contributions as the funded ratio declines, and the impact on the plan's liquidity needs.

2. ERS's current Investment Objectives are listed below. How would your study results combined with the Investment Objectives translate into a Statement of Risk Appetite? Have you done this in previous studies?

a. ERS Investment Objectives

- I. Have the ability to pay all benefit and expense obligations when due.
- II. Achieve a fully funded status with regard to the Accumulated Benefit Obligations and 100% of the Projected Benefit Obligation.
- III. Maintain the purchasing power of the current assets and all future contributions by producing positive real rates of return on Plan assets.
- IV. Maximize returns within reasonable and prudent levels of risk in order to minimize contributions.
- V. Control costs of administering the Plan and managing the investments.
- VI. Maintain flexibility in determining the future level of contributions.

Callan regularly helps clients develop risk appetites for their appropriate situation and we have been actively conducting asset-liability studies for over 25 years. To help develop a Statement of Risk Appetite, an important element of our asset-liability studies is to articulate the targeted level of return for the Plan as embedded in the liability value (such as the ABO and PBO referenced above). That is, the value of the actuarial liability is derived using a discount rate and other economic assumptions like inflation. Hence, these economic assumptions indicate how much investment risk in the portfolio is necessary in order to achieve the return objectives that keep the plan on its course to full funding. Another important area of our asset-liability studies is to ensure sufficient liquidity in the investment strategy to best manage the ability to pay benefits, particularly in times of market stress.

3. The Chief Investment Officer wants to incorporate "risk capacity" into this asset-liability study and has identified a paper by PPCmetrics2 which he believes will be useful given the current and near-term profile of ERS. Can you incorporate the paper's measures of "structural risk capacity," "financial risk capacity," and the "risk-bearing funding ratio" into the assetliability study?

Callan has typically performed this type of analysis for corporate plans whose liability discount rate is driven by a high quality corporate yield curve rather than a long-term return assumption. We can evaluate this for S&WB, but as highlighted earlier, it would mean lowering the discount rate for this portion of the liability into the 3-3.5% range based on current yield levels. Since our models are able to partition the liability between

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groups of participants like active employee, terminated vested or retiree, we are able to incorporate the measurements discussed in the paper and to help articulate the risk dimensions favored by your organization.

- a. If your response is "yes," please outline briefly whether you have done this or something similar before or if you have not used the concept before, how you might do so here.**

Yes, Callan is able to incorporate the research discussed in the paper with some additional thoughts for consideration. One concept that the paper advances is that discount rate for the retiree liabilities of the plan should reflect fixed income yields rather than a long-term return assumption. That would mean lowering the discount rate for this portion of the liability into the 3-3.5% range based on current yield levels. Since our models are able to partition the liability between groups of participants like active employee, terminated vested or retiree, we are able to incorporate the measurements discussed in the paper and to help articulate the risk dimensions favored by your organization.

- b. If your response is "no," please outline briefly, what concept(s)/measure(s) you believe are more appropriate and whether you would incorporate your preferred measures into the asset-liability study.**

As articulated above, Callan would like to incorporate other measures of the risk and reward tradeoff analysis into the asset-liability study. In addition to examining accrued funded ratios, there are a number of other variables to consider in developing a long-term investment strategy. As mentioned earlier, contribution volatility, liquidity needs, net cash flows (i.e. contributions – benefit payments) and actuarial assumptions are important areas to include the analysis.

N. Fees and Costs for Proposed Service

- 1. Please state the proposed cost in dollars to provide all the work to be performed as described in Section II (Phases I and II).**

- a. As an alternative, the respondent may propose:**

- I. A total dollar amount for Phase I as described in Section II and**
- II. A cost per hour and estimated hours to complete Phase II as described in Section II.**

Callan proposes a one-time, all-inclusive fee of \$45,000 for the services requested by the Board in Section II of the RFP. This fee is inclusive of all incidental and travel-related costs for Callan personnel for the duration of this engagement. Our fee includes the following services:

- Comprehensive asset-liability study that incorporates Callan's capital market projections, liability data provided by the Board actuary and any modeling/scenario analysis requested by staff or the Board
- Cooperation with the plan actuary to gather all data necessary to conduct the study
- Detailed report describing Callan's forecast and simulations and metrics for evaluating plan outcomes

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- Up to four in-person meetings with staff, the CIO and ERS Pension Committee and unlimited meetings via telephone to discuss key results, revisions to the study and/or assumptions and any modeling changes requested by staff or the Board
- Access to all Callan research for the duration of the engagement

FORM ADV**UNIFORM APPLICATION FOR INVESTMENT ADVISER REGISTRATION AND REPORT BY
EXEMPT REPORTING ADVISERS****Primary Business Name: CALLAN****CRD Number: 107687****Other-Than-Annual Amendment - All Sections****Rev. 10/2012****9/12/2017 1:00:53 PM**

WARNING: Complete this form truthfully. False statements or omissions may result in denial of your application, revocation of your registration, or criminal prosecution. You must keep this form updated by filing periodic amendments. See Form ADV General Instruction 4.

Item 1 Identifying Information

Responses to this Item tell us who you are, where you are doing business, and how we can contact you.

A. Your full legal name (if you are a sole proprietor, your last, first, and middle names):

CALLAN LLC

B. Name under which you primarily conduct your advisory business, if different from Item 1.A.:

CALLAN

List on Section 1.B. of Schedule D any additional names under which you conduct your advisory business.

C. If this filing is reporting a change in your legal name (Item 1.A.) or primary business name (Item 1.B.), enter the new name and specify whether the name change is of
☐ your legal name or ☐ your primary business name:

D. (1) If you are registered with the SEC as an investment adviser, your SEC file number: **801-9219**
 (2) If you report to the SEC as an exempt reporting adviser, your SEC file number:

E. If you have a number ("CRD Number") assigned by the FINRA's CRD system or by the IARD system, your CRD number: **107687**

If your firm does not have a CRD number, skip this Item 1.E. Do not provide the CRD number of one of your officers, employees, or affiliates.

F. *Principal Office and Place of Business*

(1) Address (do not use a P.O. Box):

Number and Street 1:

600 MONTGOMERY STREET

City:

SAN FRANCISCO

State:

California

Number and Street 2:

SUITE 800

Country:

United States

ZIP+4/Postal Code:

94111

If this address is a private residence, check this box: ☐

List on Section 1.F. of Schedule D any office, other than your principal office and place of business, at which you conduct investment advisory business. If you are applying for registration, or are registered, with one or more state securities authorities, you must list all of your offices in the state or states to

which you are applying for registration or with whom you are registered. If you are applying for SEC registration, if you are registered only with the SEC, or if you are reporting to the SEC as an exempt reporting adviser, list the largest five offices in terms of numbers of employees.

- (2) Days of week that you normally conduct business at your *principal office and place of business*:

☒ Monday - Friday ☐ Other:

Normal business hours at this location:

8 AM - 5 PM

- (3) Telephone number at this location:

415-974-5060

- (4) Facsimile number at this location:

415-291-4019

- G. Mailing address, if different from your *principal office and place of business* address:

Number and Street 1:

Number and Street 2:

City:

State:

Country:

ZIP+4/Postal Code:

If this address is a private residence, check this box: ☐

- H. If you are a sole proprietor, state your full residence address, if different from your *principal office and place of business* address in Item 1.F.:

Number and Street 1:

Number and Street 2:

City:

State:

Country:

ZIP+4/Postal Code:

Yes No

- I. Do you have one or more websites?

☒ ☐

If "yes," list all website addresses on Section 1.I. of Schedule D. If a website address serves as a portal through which to access other information you have published on the web, you may list the portal without listing addresses for all of the other information. Some advisers may need to list more than one portal address. Do not provide individual electronic mail (e-mail) addresses in response to this Item.

- J. Provide the name and contact information of your Chief Compliance Officer: If you are an *exempt reporting adviser*, you must provide the contact information for your Chief Compliance Officer, if you have one. If not, you must complete Item 1.K. below.

Name:

ANN C. DE LUCE

Other titles, if any:

CHIEF COMPLIANCE OFFICER

Telephone number:

415-974-5060

Facsimile number:

415-291-4114

Number and Street 1:

600 MONTGOMERY STREET

Number and Street 2:

SUITE 800

City:

SAN FRANCISCO

State:

California

Country:

United States

ZIP+4/Postal Code:

94111

Electronic mail (e-mail) address, if Chief Compliance Officer has one:

DELUCE@CALLAN.COM

- K. Additional Regulatory Contact Person: If a person other than the Chief Compliance Officer is authorized to receive information and respond to questions about this Form ADV, you may provide that information here.

Name:		Titles:	
ROSANNA SANGALANG		SVP HUMAN RESOURCES & COMPLIANCE	
Telephone number:		Facsimile number:	
415-974-5060		415-291-4114	
Number and Street 1:		Number and Street 2:	
600 MONTGOMERY STREET		SUITE 800	
City:	State:	Country:	ZIP+4/Postal Code:
SAN FRANCISCO	California	United States	94111

Electronic mail (e-mail) address, if contact person has one:
SANGALANG@CALLAN.COM

- L. Do you maintain some or all of the books and records you are required to keep under Section 204 of the Advisers Act, or similar state law, somewhere other than your *principal office and place of business*? Yes No
☒ ☐

If "yes," complete Section 1.L. of Schedule D.

- M. Are you registered with a *foreign financial regulatory authority*? Yes No
☐ ☒

Answer "no" if you are not registered with a foreign financial regulatory authority, even if you have an affiliate that is registered with a foreign financial regulatory authority. If "yes," complete Section 1.M. of Schedule D.

- N. Are you a public reporting company under Sections 12 or 15(d) of the Securities Exchange Act of 1934? Yes No
☐ ☒

If "yes," provide your CIK number (Central Index Key number that the SEC assigns to each public reporting company):

- O. Did you have \$1 billion or more in assets on the last day of your most recent fiscal year? Yes No
☐ ☒

- P. Provide your *Legal Entity Identifier* if you have one:

A *legal entity identifier* is a unique number that companies use to identify each other in the financial marketplace. In the first half of 2011, the *legal entity identifier* standard was still in development. You may not have a *legal entity identifier*.

SECTION 1.B. Other Business Names

List your other business names and the jurisdictions in which you use them. You must complete a separate Schedule D Section 1.B. for each business name.

Name: CALLAN ASSOCIATES INC.

Jurisdictions

<input type="checkbox"/> AL	<input checked="" type="checkbox"/> IL	<input checked="" type="checkbox"/> NE	<input type="checkbox"/> SC
<input checked="" type="checkbox"/> AK	<input checked="" type="checkbox"/> IN	<input checked="" type="checkbox"/> NV	<input type="checkbox"/> SD
<input checked="" type="checkbox"/> AZ	<input type="checkbox"/> IA	<input checked="" type="checkbox"/> NH	<input checked="" type="checkbox"/> TN
<input type="checkbox"/> AR	<input checked="" type="checkbox"/> KS	<input checked="" type="checkbox"/> NJ	<input checked="" type="checkbox"/> TX
<input checked="" type="checkbox"/> CA	<input type="checkbox"/> KY	<input type="checkbox"/> NM	<input type="checkbox"/> UT
<input checked="" type="checkbox"/> CO	<input checked="" type="checkbox"/> LA	<input checked="" type="checkbox"/> NY	<input checked="" type="checkbox"/> VT
<input checked="" type="checkbox"/> CT	<input type="checkbox"/> ME	<input checked="" type="checkbox"/> NC	<input type="checkbox"/> VI
<input type="checkbox"/> DE	<input checked="" type="checkbox"/> MD	<input type="checkbox"/> ND	<input checked="" type="checkbox"/> VA
<input type="checkbox"/> DC	<input checked="" type="checkbox"/> MA	<input checked="" type="checkbox"/> OH	<input checked="" type="checkbox"/> WA
<input checked="" type="checkbox"/> FL	<input checked="" type="checkbox"/> MI	<input type="checkbox"/> OK	<input type="checkbox"/> WV
<input checked="" type="checkbox"/> GA	<input checked="" type="checkbox"/> MN	<input type="checkbox"/> OR	<input checked="" type="checkbox"/> WI
<input type="checkbox"/> GU	<input type="checkbox"/> MS	<input checked="" type="checkbox"/> PA	<input type="checkbox"/> WY
<input checked="" type="checkbox"/> HI	<input checked="" type="checkbox"/> MO	<input type="checkbox"/> PR	<input type="checkbox"/> Other:
<input type="checkbox"/> ID	<input type="checkbox"/> MT	<input type="checkbox"/> RI	

SECTION 1.F. Other Offices

Complete the following information for each office, other than your *principal office and place of business*, at which you conduct investment advisory business. You must complete a separate Schedule D Section 1.F. for each location. If you are applying for SEC registration, if you are registered only with the SEC, or if you are an *exempt reporting adviser*, list only the largest five offices (in terms of numbers of employees).

Number and Street 1:

1 DEFOREST AVENUE

Number and Street 2:

SUITE 101

City:

SUMMIT

State:

New Jersey

Country:

United States

ZIP+4/Postal Code:

07901

If this address is a private residence, check this box: ☐

Telephone Number:

908-522-3880

Facsimile Number:

908-277-1503

Complete the following information for each office, other than your *principal office and place of business*, at which you conduct investment advisory business. You must complete a separate Schedule D Section 1.F. for each location. If you are applying for SEC registration, if you are registered only with the SEC, or if you are an *exempt reporting adviser*, list only the largest five offices (in terms of numbers of employees).

Number and Street 1:

120 N. LA SALLE STREET

Number and Street 2:

SUITE 2400

City:	State:	Country:	ZIP+4/Postal Code:
CHICAGO	Illinois	United States	60602-2424

If this address is a private residence, check this box: ☐

Telephone Number:	Facsimile Number:
312-346-3536	312-346-1356

Complete the following information for each office, other than your *principal office and place of business*, at which you conduct investment advisory business. You must complete a separate Schedule D Section 1.F. for each location. If you are applying for SEC registration, if you are registered only with the SEC, or if you are an *exempt reporting adviser*, list only the largest five offices (in terms of numbers of employees).

Number and Street 1:	Number and Street 2:		
300 GALLERIA PARKWAY	SUITE 950		
City:	State:	Country:	ZIP+4/Postal Code:
ATLANTA	Georgia	United States	30339-3153

If this address is a private residence, check this box: ☐

Telephone Number:	Facsimile Number:
770-618-2140	770-618-2141

Complete the following information for each office, other than your *principal office and place of business*, at which you conduct investment advisory business. You must complete a separate Schedule D Section 1.F. for each location. If you are applying for SEC registration, if you are registered only with the SEC, or if you are an *exempt reporting adviser*, list only the largest five offices (in terms of numbers of employees).

Number and Street 1:	Number and Street 2:		
1900 16TH STREET	SUITE 1175		
City:	State:	Country:	ZIP+4/Postal Code:
DENVER	Colorado	United States	80202-1115

If this address is a private residence, check this box: ☐

Telephone Number:	Facsimile Number:
303-861-1900	303-832-8230

Complete the following information for each office, other than your *principal office and place of business*, at which you conduct investment advisory business. You must complete a separate Schedule D Section 1.F. for

each location. If you are applying for SEC registration, if you are registered only with the SEC, or if you are an *exempt reporting adviser*, list only the largest five offices (in terms of numbers of *employees*).

Number and Street 1:

4550 FINCH STREET

Number and Street 2:

City:

MUKILTEO

State:

Washington

Country:

United States

ZIP+4/Postal Code:

98275

If this address is a private residence, check this box: ☒

Telephone Number:

415-274-3052

Facsimile Number:

415-291-4014

SECTION 1.I. Website Addresses

List your website addresses. You must complete a separate Schedule D Section 1.I. for each website address.

Website Address: [HTTP://WWW.CALLAN.COM/](http://WWW.CALLAN.COM/)

SECTION 1.L. Location of Books and Records

Complete the following information for each location at which you keep your books and records, other than your *principal office and place of business*. You must complete a separate Schedule D Section 1.L. for each location.

Name of entity where books and records are kept:

THE BANK OF NEW YORK MELLON

Number and Street 1:

135 SANTILLI HIGHWAY

Number and Street 2:

City:

EVERETT

State:

Massachusetts

Country:

United States

ZIP+4/Postal Code:

02149

If this address is a private residence, check this box: ☐

Telephone Number:

617-382-2676

Facsimile number:

This is (check one):

- ☐ one of your branch offices or affiliates.
☐ a third-party unaffiliated recordkeeper.
☒ other.

Briefly describe the books and records kept at this location:

A PORTION OR SOME OF THE PRIVATE TRUSTS RECORDS ARE KEPT AT THE GROUP TRUSTEE, THE BANK OF NEW YORK MELLON.

SECTION 1.M. Registration with Foreign Financial Regulatory Authorities

No Information Filed

Item 2 SEC Registration/Reporting

Responses to this Item help us (and you) determine whether you are eligible to register with the SEC. Complete this Item 2.A. only if you are applying for SEC registration or submitting an *annual updating amendment* to your SEC registration.

- A. To register (or remain registered) with the SEC, you must check **at least one** of the Items 2.A.(1) through 2.A.(12), below. If you are submitting an *annual updating amendment* to your SEC registration and you are no longer eligible to register with the SEC, check Item 2.A.(13). Part 1A Instruction 2 provides information to help you determine whether you may affirmatively respond to each of these items.

You (the adviser):

- ☒ (1) are a **large advisory firm** that either:
- (a) has regulatory assets under management of \$100 million (in U.S. dollars) or more, or
 - (b) has regulatory assets under management of \$90 million (in U.S. dollars) or more at the time of filing its most recent *annual updating amendment* and is registered with the SEC;
- ☐ (2) are a **mid-sized advisory firm** that has regulatory assets under management of \$25 million (in U.S. dollars) or more but less than \$100 million (in U.S. dollars) and you are either:
- (a) not required to be registered as an adviser with the *state securities authority* of the state where you maintain your *principal office and place of business*, or
 - (b) not subject to examination by the *state securities authority* of the state where you maintain your *principal office and place of business*;
- Click **HERE** for a list of states in which an investment adviser, if registered, would not be subject to examination by the state securities authority.*
- ☐ (3) have your *principal office and place of business* in **Wyoming** (which does not regulate advisers);
- ☐ (4) have your *principal office and place of business* **outside the United States**;
- ☒ (5) are an **investment adviser (or sub-adviser) to an investment company** registered under the Investment Company Act of 1940;
- ☐ (6) are an **investment adviser to a company which has elected to be a business development company** pursuant to section 54 of the Investment Company Act of 1940 and has not withdrawn the election, and you have at least \$25 million of regulatory assets under management;
- ☒ (7) are a **pension consultant** with respect to assets of plans having an aggregate value of at least \$200,000,000 that qualifies for the exemption in rule 203A-2(a);
- ☐ (8) are a **related adviser** under rule 203A-2(b) that *controls*, is *controlled* by, or is under common control with, an investment adviser that is registered with the SEC, and your *principal office and place of business* is the same as the registered adviser;
- If you check this box, complete Section 2.A.(8) of Schedule D.*
- ☐ (9) are a **newly formed adviser** relying on rule 203A-2(c) because you expect to be eligible for SEC registration within 120 days;
- If you check this box, complete Section 2.A.(9) of Schedule D.*
- ☐ (10) are a **multi-state adviser** that is required to register in 15 or more states and is relying on rule 203A-2(d);
- If you check this box, complete Section 2.A.(10) of Schedule D.*

- ☐ (11) are an **Internet adviser** relying on rule 203A-2(e);
- ☐ (12) have **received an SEC order** exempting you from the prohibition against registration with the SEC;

If you check this box, complete Section 2.A.(12) of Schedule D.

- ☐ (13) are **no longer eligible** to remain registered with the SEC.

State Securities Authority Notice Filings and State Reporting by Exempt Reporting Advisers

- C. Under state laws, SEC-registered advisers may be required to provide to *state securities authorities* a copy of the Form ADV and any amendments they file with the SEC. These are called *notice filings*. In addition, *exempt reporting advisers* may be required to provide *state securities authorities* with a copy of reports and any amendments they file with the SEC. If this is an initial application or report, check the box(es) next to the state(s) that you would like to receive notice of this and all subsequent filings or reports you submit to the SEC. If this is an amendment to direct your *notice filings* or reports to additional state(s), check the box(es) next to the state(s) that you would like to receive notice of this and all subsequent filings or reports you submit to the SEC. If this is an amendment to your registration to stop your *notice filings* or reports from going to state(s) that currently receive them, uncheck the box(es) next to those state(s).

Jurisdictions

<input type="checkbox"/> AL	<input checked="" type="checkbox"/> IL	<input checked="" type="checkbox"/> NE	<input type="checkbox"/> SC
<input checked="" type="checkbox"/> AK	<input checked="" type="checkbox"/> IN	<input checked="" type="checkbox"/> NV	<input type="checkbox"/> SD
<input checked="" type="checkbox"/> AZ	<input type="checkbox"/> IA	<input checked="" type="checkbox"/> NH	<input checked="" type="checkbox"/> TN
<input type="checkbox"/> AR	<input checked="" type="checkbox"/> KS	<input checked="" type="checkbox"/> NJ	<input checked="" type="checkbox"/> TX
<input checked="" type="checkbox"/> CA	<input type="checkbox"/> KY	<input type="checkbox"/> NM	<input type="checkbox"/> UT
<input checked="" type="checkbox"/> CO	<input checked="" type="checkbox"/> LA	<input checked="" type="checkbox"/> NY	<input checked="" type="checkbox"/> VT
<input checked="" type="checkbox"/> CT	<input type="checkbox"/> ME	<input checked="" type="checkbox"/> NC	<input type="checkbox"/> VI
<input type="checkbox"/> DE	<input checked="" type="checkbox"/> MD	<input type="checkbox"/> ND	<input checked="" type="checkbox"/> VA
<input type="checkbox"/> DC	<input checked="" type="checkbox"/> MA	<input checked="" type="checkbox"/> OH	<input checked="" type="checkbox"/> WA
<input checked="" type="checkbox"/> FL	<input checked="" type="checkbox"/> MI	<input type="checkbox"/> OK	<input type="checkbox"/> WV
<input checked="" type="checkbox"/> GA	<input checked="" type="checkbox"/> MN	<input type="checkbox"/> OR	<input checked="" type="checkbox"/> WI
<input type="checkbox"/> GU	<input type="checkbox"/> MS	<input checked="" type="checkbox"/> PA	<input type="checkbox"/> WY
<input checked="" type="checkbox"/> HI	<input checked="" type="checkbox"/> MO	<input type="checkbox"/> PR	
<input type="checkbox"/> ID	<input type="checkbox"/> MT	<input type="checkbox"/> RI	

If you are amending your registration to stop your notice filings or reports from going to a state that currently receives them and you do not want to pay that state's notice filing or report filing fee for the coming year, your amendment must be filed before the end of the year (December 31).

SECTION 2.A.(8) Related Adviser

If you are relying on the exemption in rule 203A-2(b) from the prohibition on registration because you *control*, are *controlled by*, or are under common *control* with an investment adviser that is registered with the SEC and your *principal office and place of business* is the same as that of the registered adviser, provide the following information:

Name of Registered Investment Adviser

CRD Number of Registered Investment Adviser

SEC Number of Registered Investment Adviser

801 -

SECTION 2.A.(9) Newly Formed Adviser

If you are relying on rule 203A-2(c), the newly formed adviser exemption from the prohibition on registration, you are required to make certain representations about your eligibility for SEC registration. By checking the appropriate boxes, you will be deemed to have made the required representations. You must make both of these representations:

- ☐ I am not registered or required to be registered with the SEC or a *state securities authority* and I have a reasonable expectation that I will be eligible to register with the SEC within 120 days after the date my registration with the SEC becomes effective.
- ☐ I undertake to withdraw from SEC registration if, on the 120th day after my registration with the SEC becomes effective, I would be prohibited by Section 203A(a) of the Advisers Act from registering with the SEC.

SECTION 2.A.(10) Multi-State Adviser

If you are relying on rule 203A-2(d), the multi-state adviser exemption from the prohibition on registration, you are required to make certain representations about your eligibility for SEC registration. By checking the appropriate boxes, you will be deemed to have made the required representations.

If you are applying for registration as an investment adviser with the SEC, you must make both of these representations:

- ☐ I have reviewed the applicable state and federal laws and have concluded that I am required by the laws of 15 or more states to register as an investment adviser with the *state securities authorities* in those states.
- ☐ I undertake to withdraw from SEC registration if I file an amendment to this registration indicating that I would be required by the laws of fewer than 15 states to register as an investment adviser with the *state securities authorities* of those states.

If you are submitting your *annual updating amendment*, you must make this representation:

- ☐ Within 90 days prior to the date of filing this amendment, I have reviewed the applicable state and federal laws and have concluded that I am required by the laws of at least 15 states to register as an investment adviser with the *state securities authorities* in those states.

SECTION 2.A.(12) SEC Exemptive Order

If you are relying upon an SEC *order* exempting you from the prohibition on registration, provide the following information:

Application Number:

803-

Date of *order*:

Item 3 Form of Organization

A. How are you organized?

- ☐ Corporation
- ☐ Sole Proprietorship
- ☐ Limited Liability Partnership (LLP)
- ☐ Partnership
- ☒ Limited Liability Company (LLC)
- ☐ Limited Partnership (LP)
- ☐ Other (specify):

If you are changing your response to this Item, see Part 1A Instruction 4.

B. In what month does your fiscal year end each year?

DECEMBER

C. Under the laws of what state or country are you organized?

State Country

California United States

If you are a partnership, provide the name of the state or country under whose laws your partnership was formed. If you are a sole proprietor, provide the name of the state or country where you reside.

If you are changing your response to this Item, see Part 1A Instruction 4.

Item 4 Successions**Yes No**

- A. Are you, at the time of this filing, succeeding to the business of a registered investment adviser? ☒ ☐

If "yes", complete Item 4.B. and Section 4 of Schedule D.

- B. Date of Succession: (MM/DD/YYYY)

09/01/2017

If you have already reported this succession on a previous Form ADV filing, do not report the succession again. Instead, check "No." See Part 1A Instruction 4.

SECTION 4 Successions

Complete the following information if you are succeeding to the business of a currently registered investment adviser. If you acquired more than one firm in the succession you are reporting on this Form ADV, you must complete a separate Schedule D Section 4 for each acquired firm. See Part 1A Instruction 4.

Name of Acquired Firm

CALLAN

Acquired Firm's SEC File No. (if any)

801 - 9219

Acquired Firm's CRD Number (if any)

107687

Item 5 Information About Your Advisory Business - Employees, Clients, and Compensation

Responses to this Item help us understand your business, assist us in preparing for on-site examinations, and provide us with data we use when making regulatory policy. Part 1A Instruction 5.a. provides additional guidance to newly formed advisers for completing this Item 5.

Employees

If you are organized as a sole proprietorship, include yourself as an employee in your responses to Item 5.A. and Items 5.B.(1), (2), (3), (4), and (5). If an employee performs more than one function, you should count that employee in each of your responses to Items 5.B.(1), (2), (3), (4), and (5).

- A. Approximately how many *employees* do you have? Include full- and part-time *employees* but do not include any clerical workers.

188

- B. (1) Approximately how many of the *employees* reported in 5.A. perform investment advisory functions (including research)?

155

- (2) Approximately how many of the *employees* reported in 5.A. are registered representatives of a broker-dealer?

0

- (3) Approximately how many of the *employees* reported in 5.A. are registered with one or more *state securities authorities* as *investment adviser representatives*?

0

- (4) Approximately how many of the *employees* reported in 5.A. are registered with one or more *state securities authorities* as *investment adviser representatives* for an investment adviser other than you?

0

- (5) Approximately how many of the *employees* reported in 5.A. are licensed agents of an insurance company or agency?

0

- (6) Approximately how many firms or other *persons* solicit advisory *clients* on your behalf?

1

In your response to Item 5.B.(6), do not count any of your employees and count a firm only once – do not count each of the firm's employees that solicit on your behalf.

Clients

In your responses to Items 5.C. and 5.D. do not include as "clients" the investors in a private fund you advise, unless you have a separate advisory relationship with those investors.

- C. (1) To approximately how many *clients* did you provide investment advisory services during your most recently completed fiscal year?

☐ 0

☐ 1-10

☐ 11-25

☐ 26-100☒ More than 100

If more than 100, how many?

(round to the nearest 100)

600

- (2) Approximately what percentage of your
- clients*
- are non-United States persons?

0%

D. For purposes of this Item 5.D., the category "individuals" includes trusts, estates, and 401(k) plans and IRAs of individuals and their family members, but does not include businesses organized as sole proprietorships. The category "business development companies" consists of companies that have made an election pursuant to section 54 of the Investment Company Act of 1940. Unless you provide advisory services pursuant to an investment advisory contract to an investment company registered under the Investment Company Act of 1940, check "None" in response to Item 5.D.(1)(d) and do not check any of the boxes in response to Item 5.D.(2)(d).

- (1) What types of *clients* do you have? Indicate the approximate percentage that each type of *client* comprises of your total number of *clients*. If a *client* fits into more than one category, check all that apply.

	None	Up to 10%	11-25%	26-50%	51-75%	76-99%	100%
(a) Individuals (other than <i>high net worth individuals</i>)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(b) <i>High net worth individuals</i>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(c) Banking or thrift institutions	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(d) Investment companies	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(e) Business development companies	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(f) Pooled investment vehicles (other than investment companies)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(g) Pension and profit sharing plans (but not the plan participants)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(h) Charitable organizations	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(i) Corporations or other businesses not listed above	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(j) State or municipal <i>government entities</i>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(k) Other investment advisers	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(l) Insurance companies	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(m) Other:	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

- (2) Indicate the approximate amount of your regulatory assets under management (reported in Item 5.F. below) attributable to each of the following type of *client*. If a *client* fits into more than one category, check all that apply.

	None	Up to 25%	Up to 50%	Up to 75%	>75%
(a) Individuals (other than <i>high net worth individuals</i>)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

- | | | | | | |
|----------------------------------------------------------------------|----------------------------------|----------------------------------|-----------------------|----------------------------------|-----------------------|
| (b) <i>High net worth individuals</i> | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| (c) Banking or thrift Institutions | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| (d) Investment companies | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| (e) Business development companies | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| (f) Pooled investment vehicles (other than investment companies) | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| (g) Pension and profit sharing plans (but not the plan participants) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> |
| (h) Charitable organizations | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| (i) Corporations or other businesses not listed above | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| (j) State or municipal <i>government entities</i> | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| (k) Other investment advisers | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| (l) Insurance companies | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| (m) Other: | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Compensation Arrangements

E. You are compensated for your investment advisory services by (check all that apply):

- ☒ (1) A percentage of assets under your management
- ☒ (2) Hourly charges
- ☐ (3) Subscription fees (for a newsletter or periodical)
- ☒ (4) Fixed fees (other than subscription fees)
- ☐ (5) Commissions
- ☐ (6) *Performance-based fees*
- ☒ (7) Other (specify): A PERCENTAGE OF ASSETS ON WHICH WE CONSULT

Item 5 Information About Your Advisory Business - Regulatory Assets Under Management**Regulatory Assets Under Management**

- | | | Yes | No |
|-----------------------------------------------------------------------------------------------------------|-----------------------|----------------------------------|-----------------------|
| F. (1) Do you provide continuous and regular supervisory or management services to securities portfolios? | | <input checked="" type="radio"/> | <input type="radio"/> |
| (2) If yes, what is the amount of your regulatory assets under management and total number of accounts? | | | |
| | U.S. Dollar Amount | Total Number of Accounts | |
| Discretionary: | (a) \$ 20,635,005,248 | (d) 8 | |
| Non-Discretionary: | (b) \$ 2,030,248,461 | (e) 2 | |
| Total: | (c) \$ 22,665,253,709 | (f) 10 | |

Part 1A Instruction 5.b. explains how to calculate your regulatory assets under management. You must follow these instructions carefully when completing this Item.

Item 5 Information About Your Advisory Business - Advisory Activities

Advisory Activities

G. What type(s) of advisory services do you provide? Check all that apply.

- ☐ (1) Financial planning services
- ☐ (2) Portfolio management for individuals and/or small businesses
- ☒ (3) Portfolio management for investment companies (as well as "business development companies" that have made an election pursuant to section 54 of the Investment Company Act of 1940)
- ☐ (4) Portfolio management for pooled investment vehicles (other than investment companies)
- ☒ (5) Portfolio management for businesses (other than small businesses) or Institutional *clients* (other than registered investment companies and other pooled investment vehicles)
- ☒ (6) Pension consulting services
- ☒ (7) Selection of other advisers (including *private fund* managers)
- ☐ (8) Publication of periodicals or newsletters
- ☐ (9) Security ratings or pricing services
- ☐ (10) Market timing services
- ☐ (11) Educational seminars/workshops
- ☒ (12) Other(specify): INVESTMENT & ASSET MANAGEMENT CONSULTING AND EDUCATION

Do not check Item 5.G.(3) unless you provide advisory services pursuant to an investment advisory contract to an investment company registered under the Investment Company Act of 1940, including as a subadviser. If you check Item 5.G.(3), report the 811 or 814 number of the investment company or investment companies to which you provide advice in Section 5.G.(3) of Schedule D.

H. If you provide financial planning services, to how many *clients* did you provide these services during your last fiscal year?

- ☐ 0
- ☐ 1 - 10
- ☐ 11 - 25
- ☐ 26 - 50
- ☐ 51 - 100
- ☐ 101 - 250
- ☐ 251 - 500
- ☐ More than 500

If more than 500, how many?
(round to the nearest 500)

In your responses to this Item 5.H., do not include as "clients" the investors in a private fund you advise, unless you have a separate advisory relationship with those investors.

I. If you participate in a wrap fee program, do you (check all that apply):

- ☐ (1) sponsor the wrap fee program?
- ☐ (2) act as a portfolio manager for the wrap fee program?

If you are a portfolio manager for a wrap fee program, list the names of the programs and their sponsors in Section 5.I.(2) of Schedule D.

If your involvement in a wrap fee program is limited to recommending wrap fee programs to your clients, or you advise a mutual fund that is offered through a wrap fee program, do not check either Item 5.I.(1) or 5.I.(2).

Yes No

- J. In response to Item 4.B. of Part 2A of Form ADV, do you indicate that you provide Investment advice only with respect to limited types of investments? ☐ ☒

SECTION 5.G.(3) Advisers to Registered Investment Companies and Business Development Companies

If you check Item 5.G.(3), what is the SEC file number (811 or 814 number) of each of the registered investment companies and business development companies to which you act as an adviser pursuant to an advisory contract? You must complete a separate Schedule D Section 5.G.(3) for each registered investment company and business development company to which you act as an adviser.

SEC File Number 811-22838

SECTION 5.I.(2) Wrap Fee Programs

No Information Filed

Item 6 Other Business Activities

In this Item, we request information about your firm's other business activities.

A. You are actively engaged in business as a (check all that apply):

- ☐ (1) broker-dealer (registered or unregistered)
- ☐ (2) registered representative of a broker-dealer
- ☐ (3) commodity pool operator or commodity trading advisor (whether registered or exempt from registration)
- ☐ (4) futures commission merchant
- ☐ (5) real estate broker, dealer, or agent
- ☐ (6) insurance broker or agent
- ☐ (7) bank (including a separately identifiable department or division of a bank)
- ☐ (8) trust company
- ☐ (9) registered municipal advisor
- ☐ (10) registered security-based swap dealer
- ☐ (11) major security-based swap participant
- ☐ (12) accountant or accounting firm
- ☐ (13) lawyer or law firm
- ☐ (14) other financial product salesperson (specify):

If you engage in other business using a name that is different from the names reported in Items 1.A. or 1.B, complete Section 6.A. of Schedule D.

- | | Yes | No |
|----------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------------|
| B. (1) Are you actively engaged in any other business not listed in Item 6.A. (other than giving investment advice)? | <input type="radio"/> | <input checked="" type="radio"/> |
| (2) If yes, is this other business your primary business? | <input type="radio"/> | <input checked="" type="radio"/> |

If "yes," describe this other business on Section 6.B.(2) of Schedule D, and if you engage in this business under a different name, provide that name.

- | | Yes | No |
|-----------------------------------------------------------------------------------------------------|-----------------------|----------------------------------|
| (3) Do you sell products or provide services other than investment advice to your advisory clients? | <input type="radio"/> | <input checked="" type="radio"/> |

If "yes," describe this other business on Section 6.B.(3) of Schedule D, and if you engage in this business under a different name, provide that name.

SECTION 6.A. Names of Your Other Businesses

No Information Filed

SECTION 6.B.(2) Description of Primary Business

Describe your primary business (not your investment advisory business):

If you engage in that business under a different name, provide that name:

SECTION 6.B.(3) Description of Other Products and Services

Describe other products or services you sell to your *client*, You may omit products and services that you listed in Section 6.B.(2) above.

If you engage in that business under a different name, provide that name.

Item 7 Financial Industry Affiliations

In this Item, we request information about your financial industry affiliations and activities. This information identifies areas in which conflicts of interest may occur between you and your *clients*.

- A. This part of Item 7 requires you to provide information about you and your *related persons*, including foreign affiliates. Your *related persons* are all of your *advisory affiliates* and any person that is under common control with you.

You have a *related person* that is a (check all that apply):

- ☐ (1) broker-dealer, municipal securities dealer, or government securities broker or dealer (registered or unregistered)
- ☒ (2) other investment adviser (including financial planners)
- ☐ (3) registered municipal advisor
- ☐ (4) registered security-based swap dealer
- ☐ (5) major security-based swap participant
- ☐ (6) commodity pool operator or commodity trading advisor (whether registered or exempt from registration)
- ☐ (7) futures commission merchant
- ☐ (8) banking or thrift institution
- ☐ (9) trust company
- ☐ (10) accountant or accounting firm
- ☐ (11) lawyer or law firm
- ☐ (12) insurance company or agency
- ☐ (13) pension consultant
- ☐ (14) real estate broker or dealer
- ☒ (15) sponsor or syndicator of limited partnerships (or equivalent), excluding pooled investment vehicles
- ☒ (16) sponsor, general partner, managing member (or equivalent) of pooled investment vehicles

For each *related person*, including foreign affiliates that may not be registered or required to be registered in the United States, complete Section 7.A. of Schedule D.

You do not need to complete Section 7.A. of Schedule D for any *related person* if: (1) you have no business dealings with the *related person* in connection with advisory services you provide to your clients; (2) you do not conduct shared operations with the *related person*; (3) you do not refer clients or business to the *related person*, and the *related person* does not refer prospective clients or business to you; (4) you do not share supervised persons or premises with the *related person*; and (5) you have no reason to believe that your relationship with the *related person* otherwise creates a conflict of interest with your clients.

You must complete Section 7.A. of Schedule D for each *related person* acting as qualified custodian in connection with advisory services you provide to your clients (other than any mutual fund transfer agent pursuant to rule 206(4)-2(b)(1)), regardless of whether you have determined the *related person* to be operationally independent under rule 206(4)-2 of the Advisers Act.

SECTION 7.A. Financial Industry Affiliations

Complete a separate Schedule D Section 7.A. for each *related person* listed in Item 7.A.

1. Legal Name of *Related Person*:
SHARPE 4 CAPITAL, LLC

2. Primary Business Name of *Related Person*:
SHARPE 4 CAPITAL, LLC
3. *Related Person's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-)
801 - 71478
or
Other
4. *Related Person's* CRD Number (if any):
133627
5. *Related Person* is: (check all that apply)
- (a) ☐ broker-dealer, municipal securities dealer, or government securities broker or dealer
 - (b) ☒ other investment adviser (including financial planners)
 - (c) ☐ registered municipal advisor
 - (d) ☐ registered security-based swap dealer
 - (e) ☐ major security-based swap participant
 - (f) ☐ commodity pool operator or commodity trading advisor (whether registered or exempt from registration)
 - (g) ☐ futures commission merchant
 - (h) ☐ banking or thrift institution
 - (i) ☐ trust company
 - (j) ☐ accountant or accounting firm
 - (k) ☐ lawyer or law firm
 - (l) ☐ insurance company or agency
 - (m) ☐ pension consultant
 - (n) ☐ real estate broker or dealer
 - (o) ☐ sponsor or syndicator of limited partnerships (or equivalent), excluding pooled investment vehicles
 - (p) ☒ sponsor, general partner, managing member (or equivalent) of pooled investment vehicles
6. Do you *control* or are you *controlled* by the *related person*? Yes No
☐ ☒
7. Are you and the *related person* under common control? ☐ ☒
8. (a) Does the *related person* act as a qualified custodian for your *clients* in connection with advisory services you provide to *clients*? ☐ ☒
- (b) If you are registering or registered with the SEC and you have answered "yes," to question 8(a) above, have you overcome the presumption that you are not operationally independent (pursuant to rule 206(4)-(2)(d)(5)) from the *related person* and thus are not required to obtain a surprise examination for your *clients'* funds or securities that are maintained at the *related person*? ☐ ☒
- (c) If you have answered "yes" to question 8.(a) above, provide the location of the *related person's* office responsible for custody of your *clients'* assets:
- Number and Street 1: _____ Number and Street 2: _____
City: _____ State: _____ Country: _____ ZIP+4/Postal Code: _____
If this address is a private residence, check this box: ☐
9. (a) If the *related person* is an investment adviser, is it exempt from registration? Yes No
☐ ☒

(b) If the answer is yes, under what exemption?

10. (a) Is the *related person* registered with a *foreign financial regulatory authority* ? ☐ ☒

(b) If the answer is yes, list the name and country, in English, of each *foreign financial regulatory authority* with which the *related person* is registered.

No Information Filed

11. Do you and the *related person* share any *supervised persons*? ☐ ☒

12. Do you and the *related person* share the same physical location? ☐ ☒

Item 7 Private Fund Reporting

Yes No

B. Are you an adviser to any *private fund*? ☒ ☐

If "yes," then for each *private fund* that you advise, you must complete a Section 7.B.(1) of Schedule D, except in certain circumstances described in the next sentence and in Instruction 6 of the Instructions to Part 1A. If another adviser reports this information with respect to any such *private fund* in Section 7.B.(1) of Schedule D of its Form ADV (e.g., if you are a subadviser), do not complete Section 7.B.(1) of Schedule D with respect to that *private fund*. You must, instead, complete Section 7.B.(2) of Schedule D.

In either case, if you seek to preserve the anonymity of a *private fund* client by maintaining its identity in your books and records in numerical or alphabetical code, or similar designation, pursuant to rule 204-2(d), you may identify the *private fund* in Section 7.B.(1) or 7.B.(2) of Schedule D using the same code or designation in place of the fund's name.

SECTION 7.B.(1) Private Fund Reporting

A. PRIVATE FUND

Information About the Private Fund

1. (a) Name of the *private fund*:

DIVERSIFIED ALPHA GROUP TRUST

(b) *Private fund* identification number:

(Include the "805-" prefix also)

805-1186792519

2. Under the laws of what state or country is the *private fund* organized:

State:

Pennsylvania

Country:

United States

3. Name(s) of General Partner, Manager, Trustee, or Directors (or persons serving in a similar capacity):

Name of General Partner, Manager, Trustee, or Director

CALLAN ASSOCIATES INC.

4. The *private fund* (check all that apply; you must check at least one):

☒ (1) qualifies for the exclusion from the definition of investment company under section 3(c)(1) of the Investment Company Act of 1940

☒ (2) qualifies for the exclusion from the definition of investment company under section 3(c)(7) of the Investment Company Act of 1940

5. List the name and country, in English, of each *foreign financial regulatory authority* with which the *private fund* is registered.

No Information Filed

Yes No

6. (a) Is this a "master fund" in a master-feeder arrangement?

☐ Yes ☒ No

- (b) If yes, what is the name and *private fund* identification number (if any) of the feeder funds investing in this *private fund*?

No Information Filed

Yes No

- (c) Is this a "feeder fund" in a master-feeder arrangement?

☐ Yes ☒ No

- (d) If yes, what is the name and *private fund* identification number (if any) of the master fund in which this *private fund* invests?

Name of the *Private Fund*:

Private Fund Identification Number:
(include the "805-" prefix also)

NOTE: You must complete question 6 for each master-feeder arrangement regardless of whether you are filing a single Schedule D, Section 7.B.(1), for the master-feeder arrangement or reporting on the funds separately.

7. If you are filing a single Schedule D, Section 7.B.(1) for a master-feeder arrangement according to the instructions to this Section 7.B.(1), for each of the feeder funds answer the following questions:

No Information Filed

NOTE: For purposes of questions 6 and 7, in a master-feeder arrangement, one or more funds ("feeder funds") invest all or substantially all of their assets in a single fund ("master fund"). A fund would also be a "feeder fund" investing in a "master fund" for purposes of this question if it issued multiple classes

(or series) of shares or interests, and each class (or series) invests substantially all of its assets in a single master fund.

Yes No

8. (a) Is this *private fund* a "fund of funds"?

☒ Yes ☐ No

(b) If yes, does the *private fund* invest in funds managed by you or by a *related person*?

☐ Yes ☒ No

NOTE: For purposes of this question only, answer "yes" if the fund invests 10 percent or more of its total assets in other pooled investment vehicles, whether or not they are also *private funds*, or registered investment companies.

Yes No

9. During your last fiscal year, did the *private fund* invest in securities issued by investment companies registered under the Investment Company Act of 1940 (other than "money market funds," to the extent provided in Instruction 6.e.)?

☒ Yes ☐ No

10. What type of fund is the *private fund*?

☐ hedge fund ☐ liquidity fund ☐ private equity fund ☐ real estate fund ☐ securitized asset fund
☐ venture capital fund ☒ Other *private fund* A COMMON TRUST FUND OF FUNDS DOMESTIC SMALL CAP PUBLICLY TRADED SECURITIES

NOTE: For funds of funds, refer to the funds in which the *private fund* invests. For definitions of these fund types, please see Instruction 6 of the Instructions to Part 1A.

11. Current gross asset value of the *private fund*:

\$ 502,205,594

Ownership

12. Minimum investment commitment required of an investor in the *private fund*:

\$ 50,000,000

NOTE: Report the amount routinely required of investors who are not your *related persons* (even if different from the amount set forth in the organizational documents of the fund).

13. Approximate number of the *private fund*'s beneficial owners:

3

14. What is the approximate percentage of the *private fund* beneficially owned by you and your *related persons*:

0%

15. What is the approximate percentage of the *private fund* beneficially owned (in the aggregate) by funds of funds:

0%

16. What is the approximate percentage of the *private fund* beneficially owned by non-United States persons:
0%

Your Advisory Services

- | | Yes | No |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------------|
| 17. (a) Are you a subadviser to this <i>private fund</i> ? | <input type="radio"/> | <input checked="" type="radio"/> |
| (b) If the answer to question 17(a) is "yes," provide the name and SEC file number, if any, of the adviser of the <i>private fund</i> . If the answer to question 17(a) is "no," leave this question blank. | | |
| No Information Filed | | |

- | | Yes | No |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------------|
| 18. (a) Do any other investment advisers advise the <i>private fund</i> ? | <input type="radio"/> | <input checked="" type="radio"/> |
| (b) If the answer to question 18(a) is "yes," provide the name and SEC file number, if any, of the other advisers to the <i>private fund</i> . If the answer to question 18(a) is "no," leave this question blank. | | |
| No Information Filed | | |

- | | Yes | No |
|----------------------------------------------------------------------------------------------------------|-----------------------|----------------------------------|
| 19. Are your <i>clients</i> solicited to invest in the <i>private fund</i> ? | <input type="radio"/> | <input checked="" type="radio"/> |
| 20. Approximately what percentage of your <i>clients</i> has invested in the <i>private fund</i> ?
0% | | |

Private Offering

- | | Yes | No |
|---------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------------|
| 21. Does the <i>private fund</i> rely on an exemption from registration of its securities under Regulation D of the Securities Act of 1933? | <input type="radio"/> | <input checked="" type="radio"/> |
| 22. If yes, provide the <i>private fund's</i> Form D file number (if any):
No Information Filed | | |

B. SERVICE PROVIDERS**Auditors**

- | | Yes | No |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|-----------------------|
| 23. (a) (1) Are the <i>private fund's</i> financial statements subject to an annual audit? | <input checked="" type="radio"/> | <input type="radio"/> |
| (2) Are the financial statements prepared in accordance with U.S. GAAP? | <input checked="" type="radio"/> | <input type="radio"/> |
| If the answer to 23(a)(1) is "yes," respond to questions (b) through (f) below. If the <i>private fund</i> uses more than one auditing firm, you must complete questions (b) through (f) separately for each auditing firm. | | |

Additional Auditor Information : 1 Record(s) Filed.

If the answer to 23(a)(1) is "yes," respond to questions (b) through (f) below. If the *private fund* uses more than one auditing firm, you must complete questions (b) through (f) separately for each auditing firm.

(b) Name of the auditing firm:

GRANT THORNTON LLP

(c) The location of the auditing firm's office responsible for the *private fund*'s audit (city, state and country):

City:

NEW YORK

State:

New York

Country:

United States

Yes No

(d) Is the auditing firm an *independent public accountant*? ☒ Yes ☐ No

(e) Is the auditing firm registered with the Public Company Accounting Oversight Board? ☒ Yes ☐ No

(f) If "yes" to (e) above, Is the auditing firm subject to regular inspection by the Public Company Accounting Oversight Board in accordance with its rules? ☒ Yes ☐ No

Yes No

(g) Are the *private fund*'s audited financial statements distributed to the *private fund*'s investors? ☒ Yes ☐ No

(h) Does the report prepared by the auditing firm contain an unqualified opinion?

☒ Yes ☐ No ☐ Report Not Yet Received

If you check "Report Not Yet Received," you must promptly file an amendment to your Form ADV to update your response when the report is available.

Prime Broker

Yes No

24. (a) Does the *private fund* use one or more prime brokers? ☐ Yes ☒ No

If the answer to 24(a) is "yes," respond to questions (b) through (e) below for each prime broker the *private fund* uses. If the *private fund* uses more than one prime broker, you must complete questions (b) through (e) separately for each prime broker.

No Information Filed

Custodian

Yes No

25. (a) Does the *private fund* use any custodians (including the prime brokers listed above) to hold some or all of its assets? ☐ Yes ☒ No

If the answer to 25(a) is "yes," respond to questions (b) through (f) below for each custodian the *private fund* uses. If the *private fund* uses more than one custodian, you must complete questions (b) through (f) separately for each custodian.

Additional Custodian Information : 1 Record(s) Filed.

If the answer to 25(a) is "yes," respond to questions (b) through (f) below for each custodian the *private fund* uses. If the *private fund* uses more than one custodian, you must complete questions (b) through (f) separately for each custodian.

- (b) Legal name of custodian:

BNY MELLON

- (c) Primary business name of custodian:

BNY MELLON

- (d) The location of the custodian's office responsible for *custody* of the *private fund's* assets (city, state and country):

City:

EVERETT

State:

Massachusetts

Country:

United States

Yes No

- (e) Is the custodian a *related person* of your firm? ☐ Yes ☒ No

- (f) If the custodian is a broker-dealer, provide its SEC registration number (if any)

CRD Number (if any):

Administrator

Yes No

26. (a) Does the *private fund* use an administrator other than your firm? ☐ Yes ☒ No

If the answer to 26(a) is "yes," respond to questions (b) through (f) below. If the *private fund* uses more than one administrator, you must complete questions (b) through (f) separately for each administrator.

Additional Administrator Information : 1 Record(s) Filed.

If the answer to 26(a) is "yes," respond to questions (b) through (f) below. If the *private fund* uses more than one administrator, you must complete questions (b) through (f) separately for each administrator.

(b) Name of the administrator:

BNY MELLON

(c) Location of administrator (city, state and country):

City:	State:	Country:
EVERETT	Massachusetts	United States

Yes No

(d) Is the administrator a *related person* of your firm?☒ ☐(e) Does the administrator prepare and send investor account statements to the *private fund's* investors?

☒ Yes (provided to all investors) ☐ Some (provided to some but not all investors) ☐ No (provided to no investors)

(f) If the answer to 26(e) is "no" or "some," who sends the investor account statements to the (rest of the) *private fund's* investors? If investor account statements are not sent to the (rest of the) *private fund's* investors, respond "not applicable."27. During your last fiscal year, what percentage of the *private fund's* assets (by value) was valued by a *person*, such as an administrator, that is not your *related person*?

100%

Include only those assets where (i) such person carried out the valuation procedure established for that asset, if any, including obtaining any relevant quotes, and (ii) the valuation used for purposes of investor subscriptions, redemptions or distributions, and fee calculations (including allocations) was the valuation determined by such person.

Marketers

Yes No

28. (a) Does the *private fund* use the services of someone other than you or your *employees* for marketing purposes?☒ ☐

You must answer "yes" whether the person acts as a placement agent, consultant, finder, introducer, municipal advisor or other solicitor, or similar person. If the answer to 28(a) is "yes", respond to questions (b) through (g) below for each such marketer the *private fund* uses. If the *private fund* uses more than one marketer you must complete questions (b) through (g) separately for each marketer.

No Information Filed

A. PRIVATE FUND

Information About the Private Fund

1. (a) Name of the
- private fund*
- :

MICRO CAP VALUE FUND

- (b)
- Private fund*
- identification number:

(Include the "805-" prefix also)

805-8863264280

2. Under the laws of what state or country is the
- private fund*
- organized:

State:

Delaware

Country:

United States

3. Name(s) of General Partner, Manager, Trustee, or Directors (or persons serving in a similar capacity):

No Information Filed

4. The
- private fund*
- (check all that apply; you must check at least one):

☒ (1) qualifies for the exclusion from the definition of investment company under section 3(c)(1) of the Investment Company Act of 1940☒ (2) qualifies for the exclusion from the definition of investment company under section 3(c)(7) of the Investment Company Act of 1940

5. List the name and country, in English, of each
- foreign financial regulatory authority*
- with which the
- private fund*
- is registered.

No Information Filed

6. (a) Is this a "master fund" in a master-feeder arrangement?

Yes No

☐ ☐

- (b) If yes, what is the name and
- private fund*
- identification number (if any) of the feeder funds investing in this
- private fund*
- ?

No Information Filed

- (c) Is this a "feeder fund" in a master-feeder arrangement?

Yes No

☐ ☐

- (d) If yes, what is the name and
- private fund*
- identification number (if any) of the master fund in which this
- private fund*
- invests?

Name of the *Private Fund*:*Private Fund* Identification Number:

(Include the "805-" prefix also)

NOTE: You must complete question 6 for each master-feeder arrangement regardless of whether you are filing a single Schedule D, Section 7.B.(1). for the master-feeder arrangement or reporting on the funds separately.

7. If you are filing a single Schedule D, Section 7.B.(1) for a master-feeder arrangement according to the instructions to this Section 7.B.(1), for each of the feeder funds answer the following questions:

No Information Filed

NOTE: For purposes of questions 6 and 7, in a master-feeder arrangement, one or more funds ("feeder funds") invest all or substantially all of their assets in a single fund ("master fund"). A fund would also be a "feeder fund" investing in a "master fund" for purposes of this question if it issued multiple classes (or series) of shares or interests, and each class (or series) invests substantially all of its assets in a single master fund.

- | | Yes | No |
|---------------------------------------------------------------------------------------------------------|----------------------------------|----------------------------------|
| 8. (a) Is this <i>private fund</i> a "fund of funds"? | <input checked="" type="radio"/> | <input type="radio"/> |
| (b) If yes, does the <i>private fund</i> invest in funds managed by you or by a <i>related person</i> ? | <input type="radio"/> | <input checked="" type="radio"/> |

NOTE: For purposes of this question only, answer "yes" if the fund invests 10 percent or more of its total assets in other pooled investment vehicles, whether or not they are also *private funds*, or registered investment companies.

- | | Yes | No |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|-----------------------|
| 9. During your last fiscal year, did the <i>private fund</i> invest in securities issued by investment companies registered under the Investment Company Act of 1940 (other than "money market funds," to the extent provided in Instruction 6.e.)? | <input checked="" type="radio"/> | <input type="radio"/> |
| 10. What type of fund is the <i>private fund</i> ? | | |
| <input type="radio"/> hedge fund <input type="radio"/> liquidity fund <input type="radio"/> private equity fund <input type="radio"/> real estate fund <input type="radio"/> securitized asset fund | | |
| <input type="radio"/> venture capital fund <input checked="" type="radio"/> Other <i>private fund</i> A DELAWARE STATUTORY TRUST OF PUBLICLY TRADED EQUITY SECURITIES. | | |

NOTE: For funds of funds, refer to the funds in which the *private fund* invests. For definitions of these fund types, please see Instruction 6 of the Instructions to Part 1A.

11. Current gross asset value of the *private fund*:
- \$ 160,536,675

Ownership

12. Minimum investment commitment required of an investor in the *private fund*:
- \$ 25,000,000

NOTE: Report the amount routinely required of investors who are not your *related persons* (even if different from the amount set forth in the organizational documents of the fund).

13. Approximate number of the *private fund's* beneficial owners:

1

14. What is the approximate percentage of the *private fund* beneficially owned by you and your *related persons*:

0%

15. What is the approximate percentage of the *private fund* beneficially owned (in the aggregate) by funds of funds:

0%

16. What is the approximate percentage of the *private fund* beneficially owned by non-*United States persons*:

0%

Your Advisory Services

	Yes	No
17. (a) Are you a subadviser to this <i>private fund</i> ?	<input type="radio"/>	<input checked="" type="radio"/>
(b) If the answer to question 17(a) is "yes," provide the name and SEC file number, if any, of the adviser of the <i>private fund</i> . If the answer to question 17(a) is "no," leave this question blank.		
No Information Filed		

	Yes	No
18. (a) Do any other investment advisers advise the <i>private fund</i> ?	<input type="radio"/>	<input checked="" type="radio"/>
(b) If the answer to question 18(a) is "yes," provide the name and SEC file number, if any, of the other advisers to the <i>private fund</i> . If the answer to question 18(a) is "no," leave this question blank.		
No Information Filed		

	Yes	No
19. Are your <i>clients</i> solicited to invest in the <i>private fund</i> ?	<input type="radio"/>	<input checked="" type="radio"/>
20. Approximately what percentage of your <i>clients</i> has invested in the <i>private fund</i> ?		
0%		

Private Offering

	Yes	No
21. Does the <i>private fund</i> rely on an exemption from registration of its securities under Regulation D of the Securities Act of 1933?	<input checked="" type="radio"/>	<input type="radio"/>
22. If yes, provide the <i>private fund's</i> Form D file number (if any):		

Form D file number

021-196548

B. SERVICE PROVIDERS**Auditors****Yes No**

23. (a) (1) Are the *private fund's* financial statements subject to an annual audit? ☒ Yes ☐ No
- (2) Are the financial statements prepared in accordance with U.S. GAAP? ☒ Yes ☐ No

If the answer to 23(a)(1) is "yes," respond to questions (b) through (f) below. If the *private fund* uses more than one auditing firm, you must complete questions (b) through (f) separately for each auditing firm.

Additional Auditor Information : 1 Record(s) Filed.

If the answer to 23(a)(1) is "yes," respond to questions (b) through (f) below. If the *private fund* uses more than one auditing firm, you must complete questions (b) through (f) separately for each auditing firm.

(b) Name of the auditing firm:

GRANT THORNTON LLP

(c) The location of the auditing firm's office responsible for the *private fund's* audit (city, state and country):

City: NEW YORK State: New York Country: United States

Yes No

- (d) Is the auditing firm an *Independent public accountant*? ☒ Yes ☐ No
- (e) Is the auditing firm registered with the Public Company Accounting Oversight Board? ☒ Yes ☐ No
- (f) If "yes" to (e) above, is the auditing firm subject to regular inspection by the Public Company Accounting Oversight Board in accordance with its rules? ☒ Yes ☐ No

Yes No

- (g) Are the *private fund's* audited financial statements distributed to the *private fund's* Investors? ☒ Yes ☐ No
- (h) Does the report prepared by the auditing firm contain an unqualified opinion? ☒ Yes ☐ No ☐ Report Not Yet Received

If you check "Report Not Yet Received," you must promptly file an amendment to your Form ADV to update your response when the report is available.

Prime Broker

Yes No

24. (a) Does the
- private fund*
- use one or more prime brokers?

☒ ☐

If the answer to 24(a) is "yes," respond to questions (b) through (e) below for each prime broker the *private fund* uses. If the *private fund* uses more than one prime broker, you must complete questions (b) through (e) separately for each prime broker.

No Information Filed

Custodian

Yes No

25. (a) Does the
- private fund*
- use any custodians (including the prime brokers listed above) to hold some or all of its assets?

☒ ☐

If the answer to 25(a) is "yes," respond to questions (b) through (f) below for each custodian the *private fund* uses. If the *private fund* uses more than one custodian, you must complete questions (b) through (f) separately for each custodian.

Additional Custodian Information : 1 Record(s) Filed.

If the answer to 25(a) is "yes," respond to questions (b) through (f) below for each custodian the *private fund* uses. If the *private fund* uses more than one custodian, you must complete questions (b) through (f) separately for each custodian.

(b) Legal name of custodian:
BNY MELLON

(c) Primary business name of custodian:
BNY MELLON

(d) The location of the custodian's office responsible for *custody* of the *private fund*'s assets (city, state and country):

City:	State:	Country:
EVERETT	Massachusetts	United States

Yes No

- (e) Is the custodian a
- related person*
- of your firm?

☒ ☐

- (f) If the custodian is a broker-dealer, provide its SEC registration number (if any)

CRD Number (if any):

Administrator**Yes No**

26. (a) Does the
- private fund*
- use an administrator other than your firm?
- ☒
- ☐

If the answer to 26(a) is "yes," respond to questions (b) through (f) below. If the *private fund* uses more than one administrator, you must complete questions (b) through (f) separately for each administrator.

Additional Administrator Information : 1 Record(s) Filed.

If the answer to 26(a) is "yes," respond to questions (b) through (f) below. If the *private fund* uses more than one administrator, you must complete questions (b) through (f) separately for each administrator.

- (b) Name of the administrator:

BNY MELLON

- (c) Location of administrator (city, state and country):

City:	State:	Country:
EVERETT	Massachusetts	United States

Yes No

- (d) Is the administrator a
- related person*
- of your firm?
- ☐
- ☒

- (e) Does the administrator prepare and send investor account statements to the
- private fund's*
- investors?

☒ Yes (provided to all investors) ☐ Some (provided to some but not all investors) ☐ No (provided to no investors)

- (f) If the answer to 26(e) is "no" or "some," who sends the investor account statements to the (rest of the)
- private fund's*
- investors? If investor account statements are not sent to the (rest of the)
- private fund's*
- investors, respond "not applicable."

27. During your last fiscal year, what percentage of the
- private fund's*
- assets (by value) was valued by a
- person*
- , such as an administrator, that is not your
- related person*
- ?

100%

Include only those assets where (i) such person carried out the valuation procedure established for that asset, if any, including obtaining any relevant quotes, and (ii) the valuation used for purposes of investor subscriptions, redemptions or distributions, and fee calculations (including allocations) was the valuation determined by such person.

Marketers**Yes No**

28. (a) Does the *private fund* use the services of someone other than you or your *employees* for marketing purposes? ☐ ☒

You must answer "yes" whether the person acts as a placement agent, consultant, finder, introducer, municipal advisor or other solicitor, or similar person. If the answer to 28(a) is "yes", respond to questions (b) through (g) below for each such marketer the *private fund* uses. If the *private fund* uses more than one marketer you must complete questions (b) through (g) separately for each marketer.

No Information Filed

SECTION 7.B.(2) Private Fund Reporting

No Information Filed

Item 8 Participation or Interest in Client Transactions

In this Item, we request information about your participation and interest in your *clients'* transactions. This information identifies additional areas in which conflicts of interest may occur between you and your *clients*.

Like Item 7, Item 8 requires you to provide information about you and your *related persons*, including foreign affiliates.

Proprietary Interest in Client Transactions

- | A. Do you or any <i>related person</i> : | Yes | No |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|
| (1) buy securities for yourself from advisory <i>clients</i> , or sell securities you own to advisory <i>clients</i> (principal transactions)? | <input type="radio"/> | <input type="radio"/> |
| (2) buy or sell for yourself securities (other than shares of mutual funds) that you also recommend to advisory <i>clients</i> ? | <input type="radio"/> | <input type="radio"/> |
| (3) recommend securities (or other investment products) to advisory <i>clients</i> in which you or any <i>related person</i> has some other proprietary (ownership) interest (other than those mentioned in Items 8.A.(1) or (2))? | <input type="radio"/> | <input type="radio"/> |

Sales Interest in Client Transactions

- | B. Do you or any <i>related person</i> : | Yes | No |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|
| (1) as a broker-dealer or registered representative of a broker-dealer, execute securities trades for brokerage customers in which advisory <i>client</i> securities are sold to or bought from the brokerage customer (agency cross transactions)? | <input type="radio"/> | <input type="radio"/> |
| (2) recommend purchase of securities to advisory <i>clients</i> for which you or any <i>related person</i> serves as underwriter, general or managing partner, or purchaser representative? | <input type="radio"/> | <input type="radio"/> |
| (3) recommend purchase or sale of securities to advisory <i>clients</i> for which you or any <i>related person</i> has any other sales interest (other than the receipt of sales commissions as a broker or registered representative of a broker-dealer)? | <input type="radio"/> | <input type="radio"/> |

Investment or Brokerage Discretion

- | C. Do you or any <i>related person</i> have <i>discretionary authority</i> to determine the: | Yes | No |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|
| (1) securities to be bought or sold for a <i>client's</i> account? | <input type="radio"/> | <input type="radio"/> |
| (2) amount of securities to be bought or sold for a <i>client's</i> account? | <input type="radio"/> | <input type="radio"/> |
| (3) broker or dealer to be used for a purchase or sale of securities for a <i>client's</i> account? | <input type="radio"/> | <input type="radio"/> |
| (4) commission rates to be paid to a broker or dealer for a <i>client's</i> securities transactions? | <input type="radio"/> | <input type="radio"/> |
| D. If you answer "yes" to C.(3) above, are any of the brokers or dealers <i>related persons</i> ? | <input type="radio"/> | <input type="radio"/> |
| E. Do you or any <i>related person</i> recommend brokers or dealers to <i>clients</i> ? | <input type="radio"/> | <input type="radio"/> |
| F. If you answer "yes" to E above, are any of the brokers or dealers <i>related persons</i> ? | <input type="radio"/> | <input type="radio"/> |
| G. (1) Do you or any <i>related person</i> receive research or other products or services other than execution from a broker-dealer or a third party ("soft dollar benefits") in connection with <i>client</i> securities transactions? | <input type="radio"/> | <input type="radio"/> |
| (2) If "yes" to G.(1) above, are all the "soft dollar benefits" you or any <i>related persons</i> receive eligible "research or brokerage services" under section 28(e) of the Securities Exchange Act of 1934? | <input type="radio"/> | <input type="radio"/> |

H. Do you or any *related person*, directly or indirectly, compensate any *person* for *client* referrals?



I. Do you or any *related person*, directly or indirectly, receive compensation from any *person* for *client* referrals?



In responding to Items 8.H and 8.I., consider all cash and non-cash compensation that you or a related person gave to (in answering Item 8.H) or received from (in answering Item 8.I) any person in exchange for client referrals, including any bonus that is based, at least in part, on the number or amount of client referrals.

Item 9 Custody

In this Item, we ask you whether you or a *related person* has *custody of client* (other than *clients* that are investment companies registered under the Investment Company Act of 1940) assets and about your custodial practices.

- | A. (1) Do you have <i>custody of any advisory clients</i> : | Yes | No |
|-------------------------------------------------------------|----------------------------------|----------------------------------|
| (a) cash or bank accounts? | <input type="radio"/> | <input checked="" type="radio"/> |
| (b) securities? | <input checked="" type="radio"/> | <input type="radio"/> |

If you are registering or registered with the SEC, answer "No" to Item 9.A.(1)(a) and (b) if you have custody solely because (i) you deduct your advisory fees directly from your clients' accounts, or (ii) a related person has custody of client assets in connection with advisory services you provide to clients, but you have overcome the presumption that you are not operationally independent (pursuant to Advisers Act rule 206(4)-(2)(d)(5)) from the related person.

- (2) If you checked "yes" to Item 9.A.(1)(a) or (b), what is the approximate amount of *client* funds and securities and total number of *clients* for which you have *custody*:

U.S. Dollar Amount	Total Number of <i>Clients</i>
(a) \$ 1,146,918,688	(b) 3

If you are registering or registered with the SEC and you have custody solely because you deduct your advisory fees directly from your clients' accounts, do not include the amount of those assets and the number of those clients in your response to Item 9.A.(2). If your related person has custody of client assets in connection with advisory services you provide to clients, do not include the amount of those assets and number of those clients in your response to 9.A.(2). Instead, include that information in your response to Item 9.B.(2).

- | B. (1) In connection with advisory services you provide to <i>clients</i> , do any of your <i>related persons</i> have <i>custody of any of your advisory clients</i> : | Yes | No |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------------|
| (a) cash or bank accounts? | <input type="radio"/> | <input checked="" type="radio"/> |
| (b) securities? | <input type="radio"/> | <input checked="" type="radio"/> |

You are required to answer this item regardless of how you answered Item 9.A.(1)(a) or (b).

- (2) If you checked "yes" to Item 9.B.(1)(a) or (b), what is the approximate amount of *client* funds and securities and total number of *clients* for which your *related persons* have *custody*:

U.S. Dollar Amount	Total Number of <i>Clients</i>
(a) \$	(b)

- C. If you or your *related persons* have *custody of client* funds or securities in connection with advisory services you provide to *clients*, check all the following that apply:

- (1) A qualified custodian(s) sends account statements at least quarterly to the investors in the pooled investment vehicle(s) you manage. ☒
- (2) An independent public accountant audits annually the pooled investment vehicle(s) that you manage and the audited financial statements are distributed to the investors in the pools. ☒

- (3) An *independent public accountant* conducts an annual surprise examination of *client* funds and securities. ☒
- (4) An *independent public accountant* prepares an internal control report with respect to custodial services when you or your *related persons* are qualified custodians for *client* funds and securities. ☐

If you checked Item 9.C.(2), C.(3) or C.(4), list in Section 9.C. of Schedule D the accountants that are engaged to perform the audit or examination or prepare an internal control report. (If you checked Item 9.C.(2), you do not have to list auditor information in Section 9.C. of Schedule D if you already provided this information with respect to the private funds you advise in Section 7.B.(1) of Schedule D).

- D. Do you or your *related person(s)* act as qualified custodians for your *clients* in connection with advisory services you provide to *clients*? **Yes No**
- (1) you act as a qualified custodian ☐ ☒
- (2) your *related person(s)* act as qualified custodian(s) ☐ ☒

If you checked "yes" to Item 9.D.(2), all related persons that act as qualified custodians (other than any mutual fund transfer agent pursuant to rule 206(4)-2(b)(1)) must be identified in Section 7.A. of Schedule D, regardless of whether you have determined the related person to be operationally independent under rule 206(4)-2 of the Advisers Act.

- E. If you are filing your *annual updating amendment* and you were subject to a surprise examination by an *independent public accountant* during your last fiscal year, provide the date (MM/YYYY) the examination commenced:
- F. If you or your *related persons* have custody of *client* funds or securities, how many persons, including, but not limited to, you and your *related persons*, act as qualified custodians for your *clients* in connection with advisory services you provide to *clients*?

1

SECTION 9.C. Independent Public Accountant

You must complete the following information for each *independent public accountant* engaged to perform a surprise examination, perform an audit of a pooled investment vehicle that you manage, or prepare an internal control report. You must complete a separate Schedule D Section 9.C. for each *independent public accountant*.

- (1) Name of the *independent public accountant*:
GRANT THORNTON LLP

- (2) The location of the *independent public accountant's* office responsible for the services provided:

Number and Street 1:

Number and Street 2:

60 BROAD STREET

City:

State:

Country:

ZIP+4/Postal Code:



NEW YORK



New York

United States

10004

Yes No

(3) Is the *independent public accountant* registered with the Public Company Accounting Oversight Board?  

(4) If yes to (3) above, Is the *independent public accountant* subject to regular inspection by the Public Company Accounting Oversight Board in accordance with its rules?  


(5) The *independent public accountant* is engaged to:

- A. ☒ audit a pooled investment vehicle
- B. ☒ perform a surprise examination of *clients'* assets
- C. ☐ prepare an internal control report

(6) Does any report prepared by the *independent public accountant* that audited the pooled investment vehicle or that examined internal controls contain an unqualified opinion?

 Yes

 No

 Report Not Yet Received

If you check "Report Not Yet Received", you must promptly file an amendment to your Form ADV to update your response when the accountant's report is available.

Item 10 Control Persons

In this Item, we ask you to identify every *person* that, directly or indirectly, *controls* you.

If you are submitting an initial application or report, you must complete Schedule A and Schedule B. Schedule A asks for information about your direct owners and executive officers. Schedule B asks for information about your indirect owners. If this is an amendment and you are updating information you reported on either Schedule A or Schedule B (or both) that you filed with your initial application or report, you must complete Schedule C.

Yes No

- A. Does any *person* not named in Item 1.A. or Schedules A, B, or C, directly or indirectly, *control* your management or policies? ☐ ☐

If yes, complete Section 10.A. of Schedule D.

- B. If any *person* named in Schedules A, B, or C or in Section 10.A. of Schedule D is a public reporting company under Sections 12 or 15(d) of the Securities Exchange Act of 1934, please complete Section 10.B. of Schedule D.

SECTION 10.A. Control Persons

No Information Filed

SECTION 10.B. Control Person Public Reporting Companies

No Information Filed

Item 11 Disclosure Information

In this Item, we ask for information about your disciplinary history and the disciplinary history of all your *advisory affiliates*. We use this information to determine whether to grant your application for registration, to decide whether to revoke your registration or to place limitations on your activities as an investment adviser, and to identify potential problem areas to focus on during our on-site examinations. One event may result in "yes" answers to more than one of the questions below.

Your *advisory affiliates* are: (1) all of your current *employees* (other than *employees* performing only clerical, administrative, support or similar functions); (2) all of your officers, partners, or directors (or any *person* performing similar functions); and (3) all *persons* directly or indirectly *controlling* you or *controlled* by you. If you are a "separately identifiable department or division" (SID) of a bank, see the Glossary of Terms to determine who your *advisory affiliates* are.

If you are registered or registering with the SEC or if you are an exempt reporting adviser, you may limit your disclosure of any event listed in Item 11 to ten years following the date of the event. If you are registered or registering with a state, you must respond to the questions as posed; you may, therefore, limit your disclosure to ten years following the date of an event only in responding to Items 11.A.(1), 11.A.(2), 11.B.(1), 11.B.(2), 11.D.(4), and 11.H.(1)(a). For purposes of calculating this ten-year period, the date of an event is the date the final order, judgment, or decree was entered, or the date any rights of appeal from preliminary orders, judgments, or decrees lapsed.

You must complete the appropriate Disclosure Reporting Page ("DRP") for "yes" answers to the questions in this Item 11.

	Yes	No
Do any of the events below involve you or any of your <i>supervised persons</i> ?	<input checked="" type="radio"/>	<input type="radio"/>

For "yes" answers to the following questions, complete a Criminal Action DRP:

A. In the past ten years, have you or any <i>advisory affiliate</i> :	Yes	No
(1) been convicted of or pled guilty or nolo contendere ("no contest") in a domestic, foreign, or military court to any <i>felony</i> ?	<input type="radio"/>	<input checked="" type="radio"/>
(2) been <i>charged</i> with any <i>felony</i> ?	<input type="radio"/>	<input checked="" type="radio"/>

If you are registered or registering with the SEC, or if you are reporting as an exempt reporting adviser, you may limit your response to Item 11.A.(2) to charges that are currently pending.

B. In the past ten years, have you or any <i>advisory affiliate</i> :	Yes	No
(1) been convicted of or pled guilty or nolo contendere ("no contest") in a domestic, foreign, or military court to a <i>misdemeanor</i> involving: investments or an <i>investment-related</i> business, or any fraud, false statements, or omissions, wrongful taking of property, bribery, perjury, forgery, counterfeiting, extortion, or a conspiracy to commit any of these offenses?	<input type="radio"/>	<input checked="" type="radio"/>
(2) been <i>charged</i> with a <i>misdemeanor</i> listed in Item 11.B.(1)?	<input type="radio"/>	<input checked="" type="radio"/>

If you are registered or registering with the SEC, or if you are reporting as an exempt reporting adviser, you may limit your response to Item 11.B.(2) to charges that are currently pending.





For "yes" answers to the following questions, complete a Regulatory Action DRP:

C. Has the SEC or the Commodity Futures Trading Commission (CFTC) ever:	Yes	No
(1) found you or any <i>advisory affiliate</i> to have made a false statement or omission?	<input checked="" type="radio"/>	<input type="radio"/>

- (2) *found* you or any *advisory affiliate* to have been *involved* in a violation of SEC or CFTC regulations or statutes? ☐ ☐
- (3) *found* you or any *advisory affiliate* to have been a cause of an *investment-related* business having its authorization to do business denied, suspended, revoked, or restricted? ☐ ☐
- (4) entered an *order* against you or any *advisory affiliate* in connection with *investment-related* activity? ☐ ☐
- (5) Imposed a civil money penalty on you or any *advisory affiliate*, or ordered you or any *advisory affiliate* to cease and desist from any activity? ☐ ☐
- D. Has any other federal regulatory agency, any state regulatory agency, or any *foreign financial regulatory authority*:
- (1) ever *found* you or any *advisory affiliate* to have made a false statement or omission, or been dishonest, unfair, or unethical? ☐ ☐
- (2) ever *found* you or any *advisory affiliate* to have been *involved* in a violation of *investment-related* regulations or statutes? ☐ ☐
- (3) ever *found* you or any *advisory affiliate* to have been a cause of an *investment-related* business having its authorization to do business denied, suspended, revoked, or restricted? ☐ ☐
- (4) In the past ten years, entered an *order* against you or any *advisory affiliate* in connection with an *investment-related* activity? ☐ ☐
- (5) ever denied, suspended, or revoked your or any *advisory affiliate's* registration or license, or otherwise prevented you or any *advisory affiliate*, by order, from associating with an *investment-related* business or restricted your or any *advisory affiliate's* activity? ☐ ☐
- E. Has any *self-regulatory organization* or commodities exchange ever:
- (1) *found* you or any *advisory affiliate* to have made a false statement or omission? ☐ ☐
- (2) *found* you or any *advisory affiliate* to have been *involved* in a violation of its rules (other than a violation designated as a "*minor rule violation*" under a plan approved by the SEC)? ☐ ☐
- (3) *found* you or any *advisory affiliate* to have been the cause of an *investment-related* business having its authorization to do business denied, suspended, revoked, or restricted? ☐ ☐
- (4) disciplined you or any *advisory affiliate* by expelling or suspending you or the *advisory affiliate* from membership, barring or suspending you or the *advisory affiliate* from association with other members, or otherwise restricting your or the *advisory affiliate's* activities? ☐ ☐
- F. Has an authorization to act as an attorney, accountant, or federal contractor granted to you or any *advisory affiliate* ever been revoked or suspended? ☐ ☐
- G. Are you or any *advisory affiliate* now the subject of any regulatory proceeding that could result in a "yes" answer to any part of Item 11.C., 11.D., or 11.E.? ☐ ☐

For "yes" answers to the following questions, complete a Civil Judicial Action DRP:

- | | Yes | No |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|
| H. (1) Has any domestic or foreign court: | | |
| (a) in the past ten years, enjoined you or any <i>advisory affiliate</i> in connection with any <i>investment-related</i> activity? | <input type="radio"/> | <input type="radio"/> |
| (b) ever <i>found</i> that you or any <i>advisory affiliate</i> were <i>involved</i> in a violation of <i>investment-related</i> statutes or regulations? | <input type="radio"/> | <input type="radio"/> |

- (c) ever dismissed, pursuant to a settlement agreement, an *investment-related* civil action brought against you or any *advisory affiliate* by a state or *foreign financial regulatory authority*?  
- (2) Are you or any *advisory affiliate* now the subject of any civil proceeding that could result in a "yes" answer to any part of Item 11.H.(1)?  

Item 12 Small Businesses

The SEC is required by the Regulatory Flexibility Act to consider the effect of its regulations on small entities. In order to do this, we need to determine whether you meet the definition of "small business" or "small organization" under rule 0-7.

Answer this Item 12 only if you are registered or registering with the SEC **and** you indicated in response to Item 5.F.(2)(c) that you have regulatory assets under management of less than \$25 million. You are not required to answer this Item 12 if you are filing for initial registration as a state adviser, amending a current state registration, or switching from SEC to state registration.

For purposes of this Item 12 only:

- Total Assets refers to the total assets of a firm, rather than the assets managed on behalf of *clients*. In determining your or another *person's* total assets, you may use the total assets shown on a current balance sheet (but use total assets reported on a consolidated balance sheet with subsidiaries included, if that amount is larger).
- *Control* means the power to direct or cause the direction of the management or policies of a *person*, whether through ownership of securities, by contract, or otherwise. Any *person* that directly or indirectly has the right to vote 25 percent or more of the voting securities, or is entitled to 25 percent or more of the profits, of another *person* is presumed to *control* the other *person*.

	Yes	No
A. Did you have total assets of \$5 million or more on the last day of your most recent fiscal year?	<input type="radio"/>	<input type="radio"/>
<i>If "yes," you do not need to answer Items 12.B. and 12.C.</i>		
B. Do you:		
(1) <i>control</i> another investment adviser that had regulatory assets under management (calculated in response to Item 5.F.(2)(c) of Form ADV) of \$25 million or more on the last day of its most recent fiscal year?	<input type="radio"/>	<input type="radio"/>
(2) <i>control</i> another <i>person</i> (other than a natural person) that had total assets of \$5 million or more on the last day of its most recent fiscal year?	<input type="radio"/>	<input type="radio"/>
C. Are you:		
(1) <i>controlled</i> by or under common <i>control</i> with another investment adviser that had regulatory assets under management (calculated in response to Item 5.F.(2)(c) of Form ADV) of \$25 million or more on the last day of its most recent fiscal year?	<input type="radio"/>	<input type="radio"/>
(2) <i>controlled</i> by or under common <i>control</i> with another <i>person</i> (other than a natural person) that had total assets of \$5 million or more on the last day of its most recent fiscal year?	<input type="radio"/>	<input type="radio"/>

Schedule A**Direct Owners and Executive Officers**

1. Complete Schedule A only if you are submitting an initial application or report. Schedule A asks for information about your direct owners and executive officers. Use Schedule C to amend this information.
2. Direct Owners and Executive Officers. List below the names of:
 - (a) each Chief Executive Officer, Chief Financial Officer, Chief Operations Officer, Chief Legal Officer, Chief Compliance Officer (Chief Compliance Officer is required if you are registered or applying for registration and cannot be more than one individual), director, and any other individuals with similar status or functions;
 - (b) if you are organized as a corporation, each shareholder that is a direct owner of 5% or more of a class of your voting securities, unless you are a public reporting company (a company subject to Section 12 or 15(d) of the Exchange Act);
 Direct owners include any *person* that owns, beneficially owns, has the right to vote, or has the power to sell or direct the sale of, 5% or more of a class of your voting securities. For purposes of this Schedule, a *person* beneficially owns any securities: (i) owned by his/her child, stepchild, grandchild, parent, stepparent, grandparent, spouse, sibling, mother-in-law, father-in-law, son-in-law, daughter-in-law, brother-in-law, or sister-in-law, sharing the same residence; or (ii) that he/she has the right to acquire, within 60 days, through the exercise of any option, warrant, or right to purchase the security.
 - (c) if you are organized as a partnership, all general partners and those limited and special partners that have the right to receive upon dissolution, or have contributed, 5% or more of your capital;
 - (d) in the case of a trust that directly owns 5% or more of a class of your voting securities, or that has the right to receive upon dissolution, or has contributed, 5% or more of your capital, the trust and each trustee; and
 - (e) if you are organized as a limited liability company ("LLC"), (i) those members that have the right to receive upon dissolution, or have contributed, 5% or more of your capital, and (ii) if managed by elected managers, all elected managers.
3. Do you have any indirect owners to be reported on Schedule B? ☒ Yes ☐ No
4. In the DE/FE/I column below, enter "DE" if the owner is a domestic entity, "FE" if the owner is an entity incorporated or domiciled in a foreign country, or "I" if the owner or executive officer is an individual.
5. Complete the Title or Status column by entering board/management titles; status as partner, trustee, sole proprietor, elected manager, shareholder, or member; and for shareholders or members, the class of securities owned (if more than one is issued).
6. Ownership codes are:

NA - less than 5%	B - 10% but less than 25%	D - 50% but less than 75%
A - 5% but less than 10%	C - 25% but less than 50%	E - 75% or more
7. (a) In the *Control Person* column, enter "Yes" if the *person* has *control* as defined in the Glossary of Terms to Form ADV, and enter "No" if the *person* does not have *control*. Note that under this definition, most executive officers and all 25% owners, general partners, elected managers, and trustees are *control persons*.
 (b) In the PR column, enter "PR" if the owner is a public reporting company under Sections 12 or 15(d) of the Exchange Act.
 (c) Complete each column.

FULL LEGAL NAME (Individuals: Last Name, First Name, Middle Name)	DE/FE/I	Status	Date Status Acquired MM/YYYY	Ownership Code	Control Person	PR	CRD No. If None: S.S. No. and Date of Birth, IRS Tax No. or Employer ID No.
BONNETTE, DAVID, FRANCIS	I	DIRECTOR (ELECTED MANAGER)	04/2010	NA	Y	N	1593248

PEYTON, RONALD, I DOUGLAS	I	EXECUTIVE CHAIRMAN & DIRECTOR (ELECTED MANAGER)	09/2017	NA	Y	N	362048
TAYLOR-HAMBLY, SUSAN, LYNN	I	SR. VP & CFO	12/2013	NA	Y	N	2082913
ALLEN, GREGORY, C I	I	PRESIDENT & CEO & DIRECTOR OF RESEARCH, & DIRECTOR (ELECTED MANAGER)	09/2017	NA	Y	N	5268058
DE LUCE, ANN, C	I	CHIEF COMPLIANCE OFFICER	01/2017	NA	Y	N	5685852
OLEARY, MICHAEL, JOSEPH	I	DIRECTOR (ELECTED MANAGER)	05/2014	NA	Y	N	1324154
SWEET, INGA, B	I	EVP, COO & DIRECTOR (ELECTED MANAGER)	01/2017	NA	Y	N	6767230
CALLAN S CORP A	DE	MEMBER	09/2017	E	Y	N	82-2748926

Schedule B**Indirect Owners**

1. Complete Schedule B only if you are submitting an initial application. Schedule B asks for information about your indirect owners; you must first complete Schedule A, which asks for information about your direct owners. Use Schedule C to amend this information.
2. Indirect Owners. With respect to each owner listed on Schedule A (except individual owners), list below:
 - (a) In the case of an owner that is a corporation, each of its shareholders that beneficially owns, has the right to vote, or has the power to sell or direct the sale of, 25% or more of a class of a voting security of that corporation;

For purposes of this Schedule, a *person* beneficially owns any securities: (i) owned by his/her child, stepchild, grandchild, parent, stepparent, grandparent, spouse, sibling, mother-in-law, father-in-law, son-in-law, daughter-in-law, brother-in-law, or sister-in-law, sharing the same residence; or (ii) that he/she has the right to acquire, within 60 days, through the exercise of any option, warrant, or right to purchase the security.

- (b) in the case of an owner that is a partnership, all general partners and those limited and special partners that have the right to receive upon dissolution, or have contributed, 25% or more of the partnership's capital;
 - (c) in the case of an owner that is a trust, the trust and each trustee; and
 - (d) in the case of an owner that is a limited liability company ("LLC"), (i) those members that have the right to receive upon dissolution, or have contributed, 25% or more of the LLC's capital, and (ii) if managed by elected managers, all elected managers.
3. Continue up the chain of ownership listing all 25% owners at each level. Once a public reporting company (a company subject to Sections 12 or 15(d) of the Exchange Act) is reached, no further ownership information need be given.
4. In the DE/FE/I column below, enter "DE" if the owner is a domestic entity, "FE" if the owner is an entity incorporated or domiciled in a foreign country, or "I" if the owner is an individual.
5. Complete the Status column by entering the owner's status as partner, trustee, elected manager, shareholder, or member; and for shareholders or members, the class of securities owned (if more than one is issued).
6. Ownership codes are:

C - 25% but less than 50%	E - 75% or more
D - 50% but less than 75%	F - Other (general partner, trustee, or elected manager)
7. (a) In the *Control Person* column, enter "Yes" if the *person* has *control* as defined in the Glossary of Terms to Form ADV, and enter "No" if the *person* does not have *control*. Note that under this definition, most executive officers and all 25% owners, general partners, elected managers, and trustees are *control persons*.
 - (b) In the PR column, enter "PR" if the owner is a public reporting company under Sections 12 or 15(d) of the Exchange Act.
 - (c) Complete each column.

No Information Filed

Schedule D - Miscellaneous

You may use the space below to explain a response to an Item or to provide any other information.

Section 7.B(1) Private Fund Reporting - Name of the private fund, Callan Multi-Manager Trust (private fund #805-8863264280) was changed to Micro Cap Value Fund. Response to Item 9 Custody (F) includes qualified custodians of Callan's Trust Advisory Group clients, but not Callan's consulting services clients.

DRP Pages**CRIMINAL DISCLOSURE REPORTING PAGE (ADV)**

No Information Filed

REGULATORY ACTION DISCLOSURE REPORTING PAGE (ADV)**GENERAL INSTRUCTIONS**

This Disclosure Reporting Page (DRP ADV) is an ☐ INITIAL **OR** ☒ AMENDED response used to report details for affirmative responses to Items 11.C., 11.D., 11.E., 11.F. or 11.G. of Form ADV.

Regulatory Action

Check item(s) being responded to:

- | | | | | |
|---------------------------------------------|---------------------------------------------|----------------------------------|---------------------------------------------|---------------------------------------------|
| <input checked="" type="checkbox"/> 11.C(1) | <input checked="" type="checkbox"/> 11.C(2) | <input type="checkbox"/> 11.C(3) | <input checked="" type="checkbox"/> 11.C(4) | <input checked="" type="checkbox"/> 11.C(5) |
| <input type="checkbox"/> 11.D(1) | <input type="checkbox"/> 11.D(2) | <input type="checkbox"/> 11.D(3) | <input type="checkbox"/> 11.D(4) | <input type="checkbox"/> 11.D(5) |
| <input type="checkbox"/> 11.E(1) | <input type="checkbox"/> 11.E(2) | <input type="checkbox"/> 11.E(3) | <input type="checkbox"/> 11.E(4) | |
| <input type="checkbox"/> 11.F. | <input type="checkbox"/> 11.G. | | | |

Use a separate DRP for each event or *proceeding*. The same event or *proceeding* may be reported for more than one *person* or entity using one DRP. File with a completed Execution Page.

One event may result in more than one affirmative answer to Items 11.C., 11.D., 11.E., 11.F. or 11.G. Use only one DRP to report details related to the same event. If an event gives rise to actions by more than one regulator, provide details to each action on a separate DRP.

PART I

A. The *person(s)* or entity(ies) for whom this DRP is being filed is (are):

- ☒ You (the advisory firm)
- ☐ You and one or more of your *advisory affiliates*
- ☐ One or more of your *advisory affiliates*

If this DRP is being filed for an *advisory affiliate*, give the full name of the *advisory affiliate* below (for Individuals, Last name, First name, Middle name).

If the *advisory affiliate* has a CRD number, provide that number. If not, indicate "non-registered" by checking the appropriate box.

ADV DRP - ADVISORY AFFILIATE

No Information Filed

- ☐ This DRP should be removed from the ADV record because the *advisory affiliate(s)* is no longer associated with the adviser.
- ☐ This DRP should be removed from the ADV record because: (1) the event or *proceeding* occurred more than ten years ago or (2) the adviser is registered or applying for registration with the SEC and

the event was resolved in the adviser's or *advisory affiliate's* favor.

If you are registered or registering with a *state securities authority*, you may remove a DRP for an event you reported only in response to Item 11.D(4), and only if that event occurred more than ten years ago. If you are registered or registering with the SEC, you may remove a DRP for any event listed in Item 11 that occurred more than ten years ago.

☐ This DRP should be removed from the ADV record because it was filed in error, such as due to a clerical or data-entry mistake. Explain the circumstances:

- B. If the *advisory affiliate* is registered through the IARD system or *CRD* system, has the *advisory affiliate* submitted a DRP (with Form ADV, BD or U-4) to the IARD or *CRD* for the event? If the answer is "Yes," no other information on this DRP must be provided.

☒ Yes ☐ No

NOTE: The completion of this form does not relieve the *advisory affiliate* of its obligation to update its IARD or *CRD* records.

PART II

1. Regulatory Action Initiated by:

☒ SEC ☐ Other Federal ☐ State ☐ SRO ☐ Foreign

(Full name of regulator, *foreign financial regulatory authority*, federal, state, or *SRO*)

SEC

2. Principal Sanction:

Cease and Desist

Other Sanctions:

3. Date Initiated (MM/DD/YYYY):

09/19/2007 ☒ Exact ☐ Explanation

If not exact, provide explanation:

4. Docket/Case Number:

SF-2826-A

5. *Advisory Affiliate* Employing Firm when activity occurred which led to the regulatory action (if applicable):

6. Principal Product Type:

No Product

Other Product Types:

7. Describe the allegations related to this regulatory action (your response must fit within the space provided):

THE MATTER CONCERNS SOME OF CALLAN'S PAST DISCLOSURES DESCRIBING ITS 1998 SALE OF ITS BROKER AFFILIATE, ALPHA MANAGEMENT, TO A SUBSIDIARY OF THE BANK OF NEW YORK (BNY). UNDER THE TERMS OF THAT TRANSACTION CALLAN WAS TO RECEIVE A SERIES OF ANNUAL PAYMENTS

FROM BNY OVER THE PERIOD FROM 1998 THROUGH 2006. AN AMOUNT EQUAL TO 92% OF EACH ANNUAL PAYMENT WAS DEPENDENT ON CALLAN ESSENTIALLY REMAINING IN THE CONSULTING BUSINESS AND UNRELATED TO BNY'S BROKERAGE REVENUE. THE FINAL 8% OF EACH PAYMENT WAS CONTINGENT ON BNY'S AGGREGATE BROKERAGE COMMISSIONS ATTRIBUTABLE TO CALLAN CLIENTS EXCEEDING 75% OF THEIR 1998 LEVELS (THE FISCAL YEAR PRIOR TO THE TRANSACTION). AS A PRACTICAL MATTER BNY EXCEEDED THIS HURDLE EACH YEAR, AND BY 2000 HAD EVEN STOPPED BOTHERING WITH THE CALCULATION. AS A RESULT CALLAN RECEIVED THE SAME ANNUAL PAYMENT THROUGHOUT THE LIFE OF THE TRANSACTION. OVER THE PERIOD FROM 1998 THROUGH 2006 CALLAN ROUTINELY DISCLOSED THE EXISTENCE OF THIS TRANSACTION TO ALL OF ITS CLIENTS, INCLUDING IN ITS FORM ADV PART II. IN THOSE DISCLOSURES THESE PAYMENTS WERE DESCRIBED SIMPLY AS "FIXED PAYMENTS" WHICH REFLECTED THEIR PRACTICAL REALITY. IN 2005, CALLAN WERE INFORMED BY THE SEC STAFF THAT THEY FELT THAT THIS DISCLOSURE WAS INCOMPLETE. AT THAT TIME CALLAN VOLUNTARILY AMENDED ITS FORM ADV PART II TO PROVIDE MORE DETAIL ON THE STRUCTURE OF THE PAYMENTS AND SENT IT OUT TO ITS CLIENTS. IN JANUARY OF 2007 THE TRANSACTION BETWEEN BNY AND CALLAN WAS CONCLUDED AND CALLAN NO LONGER RECEIVES THE PAYMENTS THAT WERE THE SUBJECT OF THE DISCLOSURE.

8. Current Status? ☐ Pending ☐ On Appeal ☒ Final

9. If on appeal, regulatory action appealed to (SEC, SRO, Federal or State Court) and Date Appeal Filed:

If Final or On Appeal, complete all items below. For Pending Actions, complete Item 13 only.

10. How was matter resolved:
Order

11. Resolution Date (MM/DD/YYYY):
09/19/2007 ☒ Exact ☐ Explanation
If not exact, provide explanation:

12. Resolution Detail:

A. Were any of the following Sanctions Ordered (check all appropriate items)?

- | | |
|------------------------------------------------------|-----------------------------------------------------------------|
| <input type="checkbox"/> Monetary/Fine Amount: \$ | <input type="checkbox"/> Disgorgement/Restitution |
| <input type="checkbox"/> Revocation/Expulsion/Denial | <input checked="" type="checkbox"/> Cease and Desist/Injunction |
| <input type="checkbox"/> Censure | <input type="checkbox"/> Suspension |
| <input type="checkbox"/> Bar | |

B. Other Sanctions Ordered:

Sanction detail: If suspended, *enjoined* or barred, provide duration including start date and capacities affected (General Securities Principal, Financial Operations Principal, etc.). If requalification by exam/retraining was a condition of the sanction, provide length of time given to requalify/retrain, type of exam required and whether condition has been satisfied. If disposition resulted in a fine, penalty, restitution, disgorgement or monetary compensation, provide total amount, portion levied against you or an *advisory affiliate* date paid and if any portion of penalty was waived:
NONE

13. Provide a brief summary of details related to the action status and (or) disposition and include relevant terms, conditions and dates (your response must fit within the space provided).

ON SEPTEMBER 19TH, 2007, THROUGH ACCEPTANCE OF AN OFFER OF SETTLEMENT BY CALLAN WHEREIN CALLAN NEITHER ADMITTED NOR DENIED THE FINDINGS, THE SEC FORMALLY REQUIRED CALLAN, VIA AN ORDER, TO CEASE-AND-DESIST FROM COMMITTING OR CAUSING ANY VIOLATIONS OR ANY FUTURE VIOLATIONS OF SECTION 207 OF THE ADVISERS ACT. CALLAN ALSO RECEIVED A CLOSING LETTER INFORMING THEM THAT THE 2003 INVESTIGATION WAS CONCLUDED.

CIVIL JUDICIAL ACTION DISCLOSURE REPORTING PAGE (ADV)

No Information Filed

Part 2**Exemption from brochure delivery requirements for SEC-registered advisers**

SEC rules exempt SEC-registered advisers from delivering a firm brochure to some kinds of clients. If these exemptions excuse you from delivering a brochure to *all* of your advisory clients, you do not have to prepare a brochure.

Yes No

Are you exempt from delivering a brochure to all of your clients under these rules?

☐ ☒

If no, complete the ADV Part 2 filing below.

Amend, retire or file new brochures:

Execution Pages**DOMESTIC INVESTMENT ADVISER EXECUTION PAGE**

You must complete the following Execution Page to Form ADV. This execution page must be signed and attached to your initial submission of Form ADV to the SEC and all amendments.

Appointment of Agent for Service of Process

By signing this Form ADV Execution Page, you, the undersigned adviser, irrevocably appoint the Secretary of State or other legally designated officer, of the state in which you maintain your *principal office and place of business* and any other state in which you are submitting a *notice filing*, as your agents to receive service, and agree that such *persons* may accept service on your behalf, of any notice, subpoena, summons, *order instituting proceedings*, demand for arbitration, or other process or papers, and you further agree that such service may be made by registered or certified mail, in any federal or state action, administrative *proceeding* or arbitration brought against you in any place subject to the jurisdiction of the United States, if the action, *proceeding*, or arbitration (a) arises out of any activity in connection with your investment advisory business that is subject to the jurisdiction of the United States, and (b) is *founded*, directly or indirectly, upon the provisions of: (i) the Securities Act of 1933, the Securities Exchange Act of 1934, the Trust Indenture Act of 1939, the Investment Company Act of 1940, or the Investment Advisers Act of 1940, or any rule or regulation under any of these acts, or (ii) the laws of the state in which you maintain your *principal office and place of business* or of any state in which you are submitting a *notice filing*.

Signature

I, the undersigned, sign this Form ADV on behalf of, and with the authority of, the investment adviser. The investment adviser and I both certify, under penalty of perjury under the laws of the United States of America, that the information and statements made in this ADV, including exhibits and any other information submitted, are true and correct, and that I am signing this Form ADV Execution Page as a free and voluntary act.

I certify that the adviser's books and records will be preserved and available for inspection as required by law. Finally, I authorize any *person* having *custody* or possession of these books and records to make them available to federal and state regulatory representatives.

Signature:
ANN C. DE LUCE

Date: MM/DD/YYYY
09/12/2017

Printed Name:
ANN C. DE LUCE

Title:
CHIEF COMPLIANCE OFFICER

Adviser CRD Number:
107687

NON-RESIDENT INVESTMENT ADVISER EXECUTION PAGE

You must complete the following Execution Page to Form ADV. This execution page must be signed and attached to your initial submission of Form ADV to the SEC and all amendments.

1. Appointment of Agent for Service of Process

By signing this Form ADV Execution Page, you, the undersigned adviser, irrevocably appoint each of the Secretary of the SEC, and the Secretary of State or other legally designated officer, of any other state in which you are submitting a *notice filing*, as your agents to receive service, and agree that such persons may accept

service on your behalf, of any notice, subpoena, summons, *order instituting proceedings*, demand for arbitration, or other process or papers, and you further agree that such service may be made by registered or certified mail, in any federal or state action, administrative *proceeding* or arbitration brought against you in any place subject to the jurisdiction of the United States, if the action, *proceeding* or arbitration (a) arises out of any activity in connection with your investment advisory business that is subject to the jurisdiction of the United States, and (b) is *founded*, directly or indirectly, upon the provisions of: (i) the Securities Act of 1933, the Securities Exchange Act of 1934, the Trust Indenture Act of 1939, the Investment Company Act of 1940, or the Investment Advisers Act of 1940, or any rule or regulation under any of these acts, or (ii) the laws of any state in which you are submitting a *notice filing*.

2. Appointment and Consent: Effect on Partnerships

If you are organized as a partnership, this irrevocable power of attorney and consent to service of process will continue in effect if any partner withdraws from or is admitted to the partnership, provided that the admission or withdrawal does not create a new partnership. If the partnership dissolves, this irrevocable power of attorney and consent shall be in effect for any action brought against you or any of your former partners.

3. *Non-Resident* Investment Adviser Undertaking Regarding Books and Records

By signing this Form ADV, you also agree to provide, at your own expense, to the U.S. Securities and Exchange Commission at its principal office in Washington D.C., at any Regional or District Office of the Commission, or at any one of its offices in the United States, as specified by the Commission, correct, current, and complete copies of any or all records that you are required to maintain under Rule 204-2 under the Investment Advisers Act of 1940. This undertaking shall be binding upon you, your heirs, successors and assigns, and any *person* subject to your written irrevocable consents or powers of attorney or any of your general partners and *managing agents*.

Signature

I, the undersigned, sign this Form ADV on behalf of, and with the authority of, the *non-resident* investment adviser. The investment adviser and I both certify, under penalty of perjury under the laws of the United States of America, that the information and statements made in this ADV, including exhibits and any other information submitted, are true and correct, and that I am signing this Form ADV Execution Page as a free and voluntary act.

I certify that the adviser's books and records will be preserved and available for inspection as required by law. Finally, I authorize any *person* having *custody* or possession of these books and records to make them available to federal and state regulatory representatives.

Signature:

Date: MM/DD/YYYY

Printed Name:

Title:

Adviser CRD Number:
107687

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Louisiana Trustee Education Council
49 Inlet Drive, Slidell, Louisiana 70458

November 22, 2017

Dear Pension Fund Trustee/Staff Member:

OFFICERS AND BOARD

Richard Hampton, Jr., President
Retired, New Orleans Fire Fighters' Pension Fund

Theodore "Theo" Sanders, Vice President
Louisiana Asset Management Pool (LAMP)

Jesse Evans, Secretary
Director, City of New Orleans Retirement System

Patricia Campbell, Treasurer
Retired, N.O. Sewerage and Water Board Pension

Charles C. Foti, Jr.
Retired, Sheriff's Pension and Relief Fund

Marina Kahn, Trustee
City of New Orleans Retirement System

Darlene LeBlanc
Retired, Teachers Retirement System of Louisiana

James Thompson, Attorney
N.O. Sewerage and Water Board Pension

Mike Treadway, Trustee
Transit Management of Southeast Louisiana (TMSL)

Warner Tureaud
Retired, Harbor Police Retirement System

ADVISORY BOARD

Kathy Singleton, Trustee
Louisiana State Employees' Retirement System (LASERS)

Warren Lawrence, Vice-President Emeritus
Retired, N.O. Sewerage and Water Board Pension

STAFF

Frank L. Jobert, Jr., Executive Director, LATEC
Trustee, Transit Management of Southeast Louisiana

Peggy Melancon, Executive Assistant
Louisiana Trustee Education Council (LATEC)

Once again, it is that time of year to plan your trustee educational endeavors for the new year. With that in mind, it is my pleasure, on behalf of the Board of Directors of LATEC (Louisiana Trustee Education Council) to invite you to attend the **14th Annual LATEC/Opal Investment Education Symposium (IES)**.

As always, the IES is being held in New Orleans, LA the week preceding Mardi Gras. The dates of the conference are February 7-9, 2018 at our new and exciting venue, **The Royal Sonesta Hotel**. The Sonesta is one of New Orleans' premiere upscale French Quarter hotels. The Royal Sonesta offers every amenity, including a balcony overlooking Bourbon St., and providing whatever any guest could possibly desire. Management and staff at the Sonesta have expressed their commitment and eagerness to make the 2018 LATEC/Opal IES the best ever. Link to hotel <https://www.sonesta.com/us/louisiana/new-orleans/royal-sonesta-new-orleans>

In keeping with our usual policy, all trustees/staffs of all Louisiana-based Pension Funds will receive complimentary registration to the event. A block of government-rate rooms has been secured and are available on a first come/first served basis until they are all booked, then regular room rates apply.

Finally, in keeping with the theme of trustee education, hourly credits in investment training, actuarial science, and fiduciary responsibility and ethics will be awarded at the end of the conference for attendance at the various educational sessions. Enclosed with this letter you will find additional details and a form to request more information about the 2018 LATEC/Opal Investment Education Symposium or feel free to visit LATEC's website: www.louisianatrustees.org

Please make plans to join us in New Orleans for an exciting educational conference and to enjoy the spirit of Mardi Gras!

Sincerely,

Frank L. Jobert, Jr., Executive Director

The Louisiana Trustee Education Council
(LATEC) and Opal Group present the

14th Annual INVESTMENT EDUCATION SYMPOSIUM

February 7-9, 2018
Royal Sonesta New Orleans, New Orleans, LA

This event will provide key information on investing, fiduciary responsibility and selection of money managers for decision makers and other representatives of the nation's largest pension funds, endowments and foundations. Investors will come from across the country not just to network but also to learn from leading fund managers, consultants and asset managers.

LATEC sponsored education credits available for this event:

- (8) hours of Investment Training***
- (1) hour of Actuarial Science Information***
- (2) hours of Fiduciary Duty and Ethics***

Join us, Wednesday evening, February 7 from 6:00 – 8:00 pm, and unwind with fellow industry professionals for refreshments, dinner, dancing and live music during our **Annual Mardi Gras Bash**.

LATEC, 49 Inlet Drive, Slidell, LA 70458 - (p) 985-643-8393 - (c) 504-289-9424 - (f) 985-645-9259
www.louisianatrustees.org - frankjobert@aol.com

