


**Commonwealth of Pennsylvania
Public School Employees' Retirement System**

DATE: July 22, 2015

SUBJECT: Independence Reinsurance Partners, LP Recommendation

TO: Members of the Board

FROM: Robert E. Little, CPA 
Portfolio Manager, Non-Traditional Investment Strategies

At the August Finance Committee meeting, staff and Aksia will recommend that PSERS invest in Independence Reinsurance Partners, LP (Fund). This Fund, managed by Independence Reinsurance Partners GP, LLC, will opportunistically invest in reinsurance funds managed by subsidiaries of RenaissanceRe Holdings Ltd. (RenRe).

RenRe is a publicly traded company specializing in insurance and reinsurance coverage. The company's business primarily consists of catastrophe reinsurance, specialty reinsurance, and individual risk solutions. RenRe was formed in 1993 to provide capital to the property catastrophe markets following Hurricane Andrew.

Staff recommends that the Board initially commit to invest an amount not to exceed \$200 million in this Fund, an amount which is within the target ranges established in Exhibit E of the Investment Policy Statement, Objectives and Guidelines as amended from time to time.

Included for your review are Aksia's recommendation letter, an investment memorandum prepared by staff, and the resolution recommending the investment in the Fund.

If you have any questions or comments prior to the meeting, please contact me at 717-720-4707.

Manager Recommendation Memo

July 22, 2015

Board of Trustees
 Pennsylvania Public School Employees' Retirement System
 5 North Fifth Street
 Harrisburg, PA 17101

Re: Independence Reinsurance Partners, LP

Dear Trustees:

Aksia LLC, having been duly authorized by the Board of PSERS, has evaluated and herewith recommends a direct allocation to Independence Reinsurance Partners, LP ("Independence") in line with PSERS Investment Policy Statement, Objectives, and Guidelines.

RenaissanceRe Fund Management Ltd. (established in June 2009) is indirectly wholly-owned by RenaissanceRe Holdings Ltd., a New York Stock Exchange listed company (NYS: RNR) that was established in 1993 and went public in 1995. RenRe Fund Management, RenRe Holdings and its subsidiaries are hereinafter referred to collectively as "RenRe". RenRe is a publicly traded firm specializing in reinsurance and insurance coverage, and has been active in managing third-party capital since 1998. Independence is a fund of one vehicle set up for the purpose of allocating to whichever of three underlying strategies, DaVinci, Medici, or Upsilon Collateralized, are best positioned to capitalize on future events.

DaVinci primarily underwrites property catastrophe reinsurance, of which coverage generally includes all natural perils: earthquakes, hurricanes, and windstorms primarily, in addition to tsunamis, freezes, tornados, fires, etc. Exposures for underlying contracts are on a case-by-case basis, ranging from worldwide basis or being limited in scope to specific regions & perils.

Medici invests specifically in catastrophe bonds and related securitized structures. The manager typically utilizes a buy-and-hold strategy with bonds purchased, but will trade them in the secondary market if conditions are favorable. The manager is agnostic with regards to risk and region preference, although by the very nature of catastrophe bonds, investors should generally expect concentrations in US Wind.

Upsilon Collateralized pursues an insurance-linked strategy, specifically focused in collateralized, worldwide aggregate retrocession. Primary exposure is generally concentrated in US risk due to the nature of global exposures. Risks will generally be underwritten for up to 12 months.

Aksia's recommendation is based upon the following analytical factors and is made within the context of PSERS' investment guidelines:

- Due diligence of each of the underlying strategies' investment processes, including a review of the sponsor, investment strategy, investment personnel, and risk management;
 - Most recent on-site investment due diligence visit conducted June 25, 2015.
 - The following is a listing of the other relevant points of contact with the manager since the last onsite visit.
- Due diligence of the underlying strategies' operations, including a review of the firm's organizational structure, service providers, regulatory and compliance, trade flow process, PPM reviews, and financial statement review;
 - Most recent on-site operational due diligence visit conducted June 25, 2015.
 - The following is a listing of the other relevant points of contact with the manager since the last onsite visit.

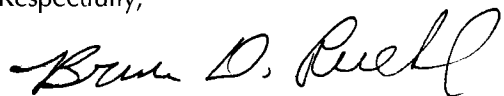
Date	Nature of Contact	Aksia Points of Contact
July 10, 2015	Call on investment follow ups	A. Patel
July 15, 2015	Call on operational follow ups	R. Desai
July 17, 2015	Call to discuss PPM terms & fee structure	R. Desai

- Evaluation of the DaVinci, Medici and Upsilon strategies within the context of the current investment environment; and
- Appropriateness of Independence as a component of PSERS' portfolio.

This recommendation is given solely for the benefit of PSERS and cannot be relied upon by other investors considering an investment in Independence, since their needs, objectives, and circumstances may not be identical to those of PSERS. The scope of this recommendation is limited to the investment merits of Independence. Aksia manager recommendation memos should be reviewed with other Aksia due diligence materials, including the full Due Diligence Report. In addition, please consult your tax, legal and/or regulatory advisors before allocating to any private investment fund.

Please feel free to contact us should you have any questions about this recommendation.

Respectfully,



Bruce Ruehl
Partner, Head of Portfolio Advisory, Americas



Norman Kilarjian
Partner, Head of Relative Value & Tactical Trading Strategies



COMMONWEALTH OF PENNSYLVANIA
PUBLIC SCHOOL EMPLOYEES' RETIREMENT SYSTEM

Public Investment Memorandum

Independence Reinsurance Partners, LP
Absolute Return Program

Robert E. Little, CPA
Portfolio Manager, Non-Traditional Investment Strategies

August 5, 2015

Firm Overview

RenaissanceRe Holdings Ltd. (RenRe) is a publicly traded company (NYSE ticker RNR) specializing in insurance and reinsurance coverage. The company's business primarily consists of catastrophe reinsurance, specialty reinsurance, and individual risk solutions. RenRe was formed in 1993 to provide capital to the property catastrophe markets following Hurricane Andrew. Since 1998, the firm has been active in managing third-party capital via private insurance structures to participate in reinsurance opportunities. RenRe's policy is to invest in these private insurance structures along with external investors creating an alignment of interests which minimizes the risk of adverse selection for external investors.

Investment Team

- The senior investment team responsible for our portfolio averages over 14 years' experience in the reinsurance industry.
 - The investment team has access to RenRe's overall infrastructure. RenRe employs over 300 employees in Bermuda, London, Ireland, Asia, and the United States.
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Investment Strategy

The insurance and reinsurance markets have historically been cyclical markets, characterized by periods of decreasing prices followed by periods of increasing prices. Capital flows into reinsurance markets after catastrophic events when there is an increase in demand for coverage and a corresponding increase in insurance rates. Capital flows out of reinsurance markets after benign periods with no catastrophic events when demand for coverage declines and insurance rates decline.

Investment Structure

Independence Reinsurance Partners, LP will be a fund of one investment vehicle. In the proposed structure, Independence Reinsurance Partners GP, LLC (GP), a subsidiary of RenRe, would have access to a \$200 million commitment from PSERS. Subject to the Investment Guidelines, GP can draw on this commitment to invest in the following three funds – DaVinci Reinsurance Ltd., RenaissanceRe Medici Fund Ltd., and RenaissanceRe Upsilon Collateralized Fund Ltd. The proposed structure will allow GP to be opportunistic when entering and exiting the insurance markets. The benefit for PSERS is that we gain access to a global firm with leading research, underwriting, modeling, and risk management capabilities, innovative solutions, attractive fee structures, and a history of disciplined, thoughtful capital deployment.

Investment Instruments

The underlying funds will invest in reinsurance contracts, catastrophe bonds, US Treasury securities, and other short duration cash instruments.

Underlying Funds Overview

DaVinci Reinsurance Ltd.

- Manager: Renaissance Underwriting Managers, Ltd. (RUM), a subsidiary of RenRe
- Strategy: Property catastrophe reinsurance written by a rated insurance carrier (rated A by A.M. Best, AA- by S&P)

- Fund Size: \$1.3 billion at March 31, 2015
- Fund Status: Soft closed
- Administrator: Self-administered
- Auditor: Ernst & Young Ltd.
- Headquarters: Bermuda

RenaissanceRe Medici Fund Ltd.

- Manager: RenaissanceRe Fund Management, Ltd. (RFM), a subsidiary of RenRe
- Strategy: Catastrophe bonds
- Fund Size: \$190 million at March 31, 2015
- Fund Status: Open
- Administrator: Prime Management Limited
- Auditor: Ernst & Young Ltd.
- Headquarters: Bermuda

RenaissanceRe Upsilon Collateralized Fund Ltd.

- Manager: RenaissanceRe Fund Management, Ltd. (RFM), a subsidiary of RenRe
- Strategy: Property catastrophe reinsurance written on a collateralized basis
- Fund Size: \$84 million at March 31, 2015 (which includes RenRe's participation)
- Fund Status: Open
- Administrator: Prime Management Limited
- Auditor: Ernst & Young Ltd.
- Headquarters: Bermuda

Key Investment Considerations

- **Capital Management:** RenRe was formed to provide capital following the property catastrophe reinsurance market dislocation after Hurricane Andrew. When evaluating the insurance markets, RenRe practices prudent capital management by only deploying capital in attractively priced markets. They will seek to raise capital when demand and rates are increasing and return capital when demand and rates are declining.
- **Modeling and Analytics:** RenRe seeks to build a portfolio of risks that produces an attractive return on invested capital. RenRe analyzes the risk of each opportunity using both underwriters' expertise and a proprietary computer-based pricing and exposure-management system. Using historical data and statistical simulations, the models can estimate the range of potential outcomes for a reinsurance contract, analyze the correlation of each reinsurance contract to the rest of the portfolio, and analyze the incremental impact of a reinsurance contract on the rest of the portfolio to produce the best risk adjusted portfolio. The models are also used to assist with the opportunistic purchase of reinsurance for their own account.
- **Customer Relationships:** RenRe has long standing relationships with reinsurers and brokers. Insurance coverage is offered alongside similar products offered by RenRe. This packaging, along with RUM/RFM's technical expertise, has enabled RenRe to strengthen customer relationships. All business underwritten uses the same underwriting discipline and systems as any business underwritten by RenRe.
- **Alignment of Interests:** RenRe participates alongside external investors in every reinsurance contract underwritten in the portfolio through their investment in each fund which reduces concern about the allocation of risk between funds.
- **Insurance is an Uncorrelated Asset Class:** The performance of the insurance market has shown to be uncorrelated to the performance of the broader financial markets. Natural catastrophic events are generally not correlated to the financial markets.

- **Relationship with WeatherPredict Consulting Inc. (WeatherPredict):** WeatherPredict is a wholly-owned subsidiary of RenRe. WeatherPredict's team of scientists and seismic engineers has expertise in oceanography, meteorology, wind engineering, aerodynamics, computer simulation, earthquake models, and seismic hazards to provide analysis of perils and the occurrence / outcomes of weather events.
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Key Investment Risks

- **Exposure to Catastrophic Events:** Property catastrophe reinsurance exposes the fund to the catastrophic risk. The fund has exposure to natural and man-made disasters. Operating results will be affected by events of large magnitude. Claims from catastrophic events could cause substantial volatility in fund performance.
 - **Loss and Loss Expense Reserves:** Reserves reflect estimates, using actuarial and statistical projections, of the ultimate cost to settle a claim. Past experience and judgment are also used to establish the loss and loss expense reserves. Occasionally, reinsurance operations produce claims which can only be resolved through litigation. Some reserve estimates may prove to be inaccurate and could result in an increase or decrease to net income.
 - **Financial Strength Ratings:** Third party rating agencies assess and rate the financial strength of insurers and reinsurers. The financial strength ratings assigned by rating agencies to reinsurance or insurance companies are based upon factors relevant to insurance policyholders and not to investors. Negative rating action could have a negative effect on their ability to participate in future opportunities they expect to participate in.
 - **Emerging Trends:** The risk and return of each reinsurance contract is analyzed using proprietary analytical and modeling tools. The models and databases used may not accurately address emerging trends that could impact coverages written. RenRe attempts to mitigate this risk by monitoring and adjusting the risk management models to interpret current developments.
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Oversight Responsibility

- **Investment Office Staff:** Bob Little
 - **External Consultant:** Aksia
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Portfolio Use

- This investment will be included in the Absolute Return Program.
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Standard Disclosures made to the Finance Committee

- **Relationship with Aksia:** None
 - **Use of Placement Agents:** None
 - **Political Contributions in PA:** None
 - **Conflicts:** No material conflicts noted
 - **Introduction Source:** Aksia
 - **History with PSERS:** This investment would be our first investment with RenRe.
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Recommendation

We recommend that PSERS invest in Independence Reinsurance Partners, LP. Our recommendation is based on the access gained to an experienced, disciplined reinsurance manager and their proven model

along with the uncorrelated investment performance on a risk adjusted basis that the proposed investment will provide.
