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Jan 15 (Reuters) - Women hedge fund managers have outperformed their male rivals, on average, for the second year in a row, according to professional services firm Rothstein Kass which tracks the industry.

From Jan. 1, 2013, through the end of November, the small number of hedge funds around the world run by women returned 9.8 percent while the HFRX Global Hedge Fund index was up only 6.13 percent, Rothstein Kass said on Wednesday, citing its own index of female-run hedge funds. Meredith Jones, a director at Rothstein Kass, said the comparison could feed speculation that women are better investors.

"There have been studies that show that testosterone can make men less sensitive to risk-reward signals, and that comes through in this study," she said.

The numbers are even more eye-popping for the six years from January 2007 through June 2013. Hedge funds run by women returned 6 percent compared with a 1.1 percent loss at the HFRX Global Fund Index. The Standard & Poor's 500 index gained 4.2 percent during the same time. The comparisons were derived from Rothstein Kass's Women in Alternative Investments Index, which includes some 80 of the world's roughly 125 women-run hedge funds.

Together, hedge funds run by women manage only a tiny fraction of the broader industry's $2.5 trillion. Among them are Jamie Zimmerman's Litespeed Management, Meridee Moore's Watershed Asset Management and Valerie Malter's Matarin Capital Management. Their small number and size have been a barrier for huge pension funds placing big chunks of money, though some including Connecticut's pension fund have programs designed to make allocations to firms run by women and minorities.

"Raising money is difficult for anyone regardless of whether you are wearing Louboutin pumps or loafers," Jones said.

Jones said a survey Rothstein Kass conducted in October of 440 senior women, including fund managers, investors, and service providers, showed growing optimism about the role of women in an industry historically dominated by men.

Some 17.5 percent of respondents not currently running a fund said they wanted to do so within the next five years, compared to 14.2 percent a year ago, Jones said.

Those running funds also see better returns on the horizon with more than half expecting to deliver double-digit profits this year, the survey found. (Editing by Richard Valdmanis and Andrew Hay)