OHIO PUBLIC EMPLOYEES RETIREMENT SYSTEM
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1-800-222-PERS (7377)
www.opers.org

MEMORANDUM

DATE: May 4, 2007

TO: OPERS Retirement Board Members
Chris DeRose, Executive Director

CC: Jennifer Hom, Director – Investments
Greg Uebele, Senior Investment Officer- External Management

FROM: Phil Paroian, Senior Investment Officer – External Public Markets
Dan Sarver, Portfolio Manager – External Public Markets

RE: **Hedge Funds Program**

Purpose

This memorandum provides a one-year review of the fund of hedge funds manager (FOHF) selections. OPERS funded Crestline Investors (Crestline) with $25 million in March 2006 and funded Pacific Alternative Asset Management Company (PAAMCO) with $25 million in May 2006. Both FOHF managers have met expectations and staff recommends additional funding of $25 million each to Crestline and PAAMCO.

Background

At the May 2004 Board meeting, OPERS staff in conjunction with Ennis Knupp + Associates (EKA) presented our research findings on hedge funds. The case was made that based on historical experience hedge funds deliver positive absolute returns with low volatility and exhibit low correlations with the traditional asset classes. At the November 2004 Board meeting, staff discussed an implementation plan to establish an initial allocation to hedge funds in compliance with the Opportunistic Fund Policy. In order to determine if hedge funds could add value to the investment portfolio at OPERS, we detailed three "success measures" for this pilot program. They were:

(1) **Performance Benchmark** – The hedge fund allocation should achieve a minimum of four percent (4.0%) annualized excess return over one-month LIBOR over the term of the investment, net of fees.
(2) **Volatility –** The return objective stated above should be achieved with an annualized standard deviation of monthly returns of less than seven percent (7.0%) per annum.

(3) **Correlations –** The portfolios' correlations should be less than 0.3 and 0.4 to the Lehman Aggregate and S&P 500 Indexes, respectively, to achieve the desired diversification.

In December 2004, the Board approved an initial hedge fund allocation in the range of $25 to $50 million, to be invested in multiple funds. This pilot program would be established in the newly created Opportunistic Fund. Opportunistic investments are only part of the defined benefit fund.

We established a three-year time horizon for this pilot program. At the end of this period, the Board, based on recommendations from OPERS staff and EKA, would decide if this program should be terminated, renewed or graduated out of the Opportunistic Fund and into a more significant allocation. In the interim, staff committed to providing periodic updates to the Board.

Working with EKA, staff initiated a search that targeted investment managers who were either fund of hedge funds managers or multi-strategy hedge fund managers. This search was completed in late 2005 and contracts were completed in 2006. Crestline and PAAMCO were funded with $25 million each on March 1, 2006 and May 1, 2006, respectively.

Although our fund of hedge funds program is still relatively young, both managers have clearly shown the ability to deliver superior absolute returns, with less volatility than the bond index, and low correlations with both equity and bond indices.

Crestline
Since our funding, the Crestline portfolio (Crestline Partners, L.P.) has generated net returns of 2.66% above the LIBOR + 4% benchmark, with significantly lower volatility of 2.42% versus a 7% threshold. Additionally, the correlations with the S&P 500 and Lehman Aggregate indices are below expectations. Table 1, on the following page, summarizes this information and Appendix A provides a profile summary for Crestline.

An important factor in achieving long-term performance is avoiding the blow-ups. Crestline avoided all of the hedge fund blow-ups in 2006. One example of a large, well-publicized hedge fund blow-up in 2006 was Amaranth Advisors. This large multi-strategy hedge fund sustained substantial losses in natural gas trading in September 2006. Crestline had no exposure. Their analysts had reviewed this manager and passed on them during their due diligence process.

There are no organizational issues that concern staff. We are confident that Crestline's staff, experience, process, discipline, and commitment to risk control will continue to deliver target returns regardless of the market's direction.

Table 1: Crestline return, volatility and correlation

Crestline Partners, L.P.
Summary Statistics (*as of March 31, 2007*)

Inception Date:	March 1, 2006
Ending Market Value	$28,251,924

	Crestline Partners, LP	LIBOR + 400 bps
Performance *		
Inception to date (annualized)	11.95%	9.29%
Volatility	2.42%	
Correlations (inception to date)		
Relative to S&P 500	0.27	
Relative to Lehman Aggregate Index	-0.11	

* Crestline returns are net of all fees & expenses

PAAMCO

With only eleven months of data since our funding, the PAAMCO portfolio (Pacific Hedged Strategies, LLC) has generated net returns 0.28% below the benchmark with 2.98% volatility, well below the 7% threshold. The correlation with the S&P 500 index is slightly above expectations over this short time period while the correlation with the Lehman Aggregate index is negative. Table 2 summarizes this information and Appendix B provides a profile summary for PAAMCO.

Table 2: PAAMCO return, volatility and correlation for 11 months unannualized

Pacific Hedged Strategies, LLC
Summary Statistics (*as of March 31, 2007*)

Inception Date:	May 1, 2006
Ending Market Value	$27,129,631

	Pacific Hedged Strategies	LIBOR + 400 bps
Performance *		
Inception to date (11 months)	8.52%	8.80%
Volatility	2.98%	
Correlations (inception to date)		
Relative to S&P 500	0.43	
Relative to Lehman Aggregate Index	-0.17	

* PHS returns are net of all fees & expenses

Similar to Crestline, PAAMCO never had any exposure to Amaranth Advisors. Their analysis showed that this supposed multi-strategy fund was actually 6x levered on its underlying Energy allocation. Avoiding blow-ups is a significant component of their risk management culture.

Staff has analyzed PAAMCO's results and is satisfied with them. PAAMCO has had a shorter period of time and was unfortunately funded at the beginning of a volatile period in which most hedge funds had negative returns for the first few months of their mandate. If we had funded PAAMCO at the same time as Crestline (March 1, 2006), then PAAMCO's annualized return would have exceeded the performance benchmark (10.45% versus 9.29%).

There are no organizational issues that concern staff. We are confident that PAAMCO's staff, experience, process, discipline, and commitment to risk control will continue to deliver target returns regardless of the market's direction.

Five year results

Given that OPERS has had each manager for relatively short periods of time, staff has also analyzed longer term results. Summary characteristics for Crestline and PAAMCO for the five years ended March 31, 2007 are shown in Table 3.

Table 3: Five year Summary

5 year (April 2002 to March 2007) Statistical Review					
	Crestline	**PAAMCO**	**S&P 500**	**Lehman Ag**	**LIBOR+400 bps**
Return (annualized)	9.43%	7.76%	6.26%	5.36%	6.79%
Standard Deviation	2.61%	3.33%	12.30%	3.74%	
Sharpe Ratio	2.63	1.56	0.30	0.75	
Maximum monthly return	2.35%	2.50%	8.79%	2.65%	
Worst monthly drawdown	-1.40%	-2.90%	-10.86%	-3.36%	
Skew	-0.15	-0.99	-0.65	-0.95	
Kurtosis	0.01	1.83	1.69	2.08	
Correlations:					
Relative to S&P 500	0.42	0.40			
Relative to Lehman Aggregate	0.00	-0.03			

Recommendation

Through the first year, Crestline Investors has clearly exceeded the success measures we developed for this hedge fund pilot program. PAAMCO, through its first eleven months, met our expectations on two of the three success measures.

Given the initial success with this program, OPERS staff recommends that both Crestline and PAAMCO receive an additional funding amount of $25 million. This would raise their respective overall funding levels to $50 million each and increase our hedge fund allocation to a total funding level of $100 million. The $100 million funding level is the maximum amount permitted by our Opportunistic Fund Policy.

Next Steps

With the approval of the Board, staff will fund Crestline and PAAMCO with an additional $25 million each. Staff will continue to monitor this program, perform the requisite due diligence and further develop the strategic relationships with our two fund of hedge funds managers.

At the end of year two of this program (second quarter 2008), OPERS staff will deliver a comprehensive review on the role of hedge funds in our defined benefit fund. Staff will include a recommendation as to whether this program should be terminated, renewed or graduated out of the Opportunistic Fund and into a more significant role within the defined benefit fund.

Appendix A

Crestline Partners, L.P.
As of 3/31/07

Fund Objective

Crestline Partners, LP is a multi-manager fund that seeks to achieve superior risk-adjusted capital appreciation over the long-term through investments in a diversified portfolio of absolute return strategies. The general partner and its affiliates seek to achieve the Fund's targeted returns with low volatility by combining astute manager selection, rigorous risk management and a dynamic investment process.

Organizational Structure

General Partner:	Crestline Associates, LP
Managers:	Douglas Bratton Caroline Cooley
Legal Counsel:	Schulte Roth & Zabel LLP
Auditors:	KPMG LLP
Administrator:	SEI Investments Global Funds
Ownership:	Crestline is an affiliate of Bratton Capital Management.
Employee ownership:	100%

Key Investment Terms

Target Return:	LIBOR + 400 bps
Target Standard Deviation:	< 4%
Minimum Investment:	$1 million
Offering:	Monthly
Withdrawals:	Quarterly (95 days notice)
Management Fee:	1.25% annually
Performance Fee:	None
Lock-up Period:	1 year
Assets in strategy:	$2.5 billion
Assets under management:	$3.0 billion

Period	Crestline *	S&P 500	Lehman Aggregate
YTD 2007 (3/31)	3.8%	0.6%	1.5%
2006	12.0%	15.8%	4.3%
2005	8.0%	4.9%	2.4%
2004	7.7%	9.2%	4.3%
2003	13.0%	26.4%	4.1%
2002	5.0%	-23.4%	10.3%

* Inception date was October 1997.
Returns are net of all fees.

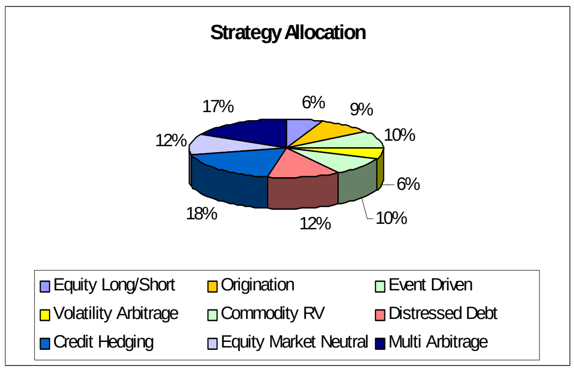
Crestline Investors, Inc.
201 Main Street, Suite 1900
Fort Worth, Texas 76102
(817) 339-7506
www.crestlineinc.com

Company Overview

Crestline Investors, Inc. is the general partner of a family of diversified hedge fund of funds serving both institutions and high net-worth individuals. Founded in 1997, the group's objective is to achieve targeted risk-adjusted capital appreciation over the long-term. Their product mix currently includes four fund of funds: a low volatility, diversified fund, an event-driven fund, a leveraged version of their low volatility diversified fund and an opportunistic fund.

The Principals of Crestline Investors, Inc. understand the strategies in which they invest. The group has worked in various capacities on behalf of the Bass family of Fort Worth, TX for over 16 years. Over this time, the Principals have been investing in sophisticated hedge fund strategies, while building long-standing relationships within the industry. Crestline Investors currently manages over $3 billion in Hedge Fund of Funds strategies.

Employees and the principals have a large percentage of their liquid net worth invested in the program.



Statistical Analysis
Last five years

	Crestline	S&P
Sharpe Ratio	2.63	0.30
Std Deviation	2.61%	12.30%
Beta	0.09	1.00
Correlation	0.42	
Best Month	2.35%	8.79%
Worst Month	-1.40%	-10.86%

Investment Philosophy and Process

At Crestline, risk management is paramount to achieving long-term performance. Protecting the downside enables their portfolio to grow and compound over time. The investment professionals at Crestline all have long-term backgrounds managing high net-worth assets where the investment mantra was to preserve capital. Crestline uses Albourne Partners, a London-based risk management-consulting firm, to provide their risk modeling reports. In their portfolio construction process, they limit the funds exposure to systematic risk factors and constrain the portfolio's volatility of returns.

Crestline uses a quantitative and qualitative screening process to determine strategy selection. After they determine the allocations to the appropriate strategies within each of their portfolios, Crestline focuses on manager selection. Their disciplined focus helps them identify managers with an "edge". Managers selected for their due diligence process are subjected to on-site visits to review both strategy and operations. The structure of the fund is evaluated and business risks are identified. Reference checks are conducted and Crestline uses an outside private investigation firm, Strategic Insight Group (SIG) to check on all current managers and prospective fund managers.

The Crestline organization has grown its assets under management and staff since our initial due diligence visit in July 2005. At that time, Crestline had total assets under management of $1.1 billion and total staff of 21 individuals. At the end of first quarter 2007, Crestline had total assets under management of $3.0 billion and a total staff of 34 employees. At the end of the first quarter, Crestline had 199 clients. Institutional clients represented 81% of their total assets under management. Crestline is currently utilizing 58 underlying hedge fund managers in its Crestline Partners, L.P. strategy. They added 14 managers in 2006 and redeemed from 8 managers.

Strengths:

The portfolio managers of Crestline Investors are seasoned professionals (trading for the Bass Family for over 16 years) and have extensive experience in actually trading non-traditional investments. Their Crestline track record goes back to late 1997 and their fund of hedge funds have never had a down year. Crestline has experience working with public funds (Alaska Permanent Fund and State of New Mexico) in the development of "pilot programs".

Their performance attribution shows a good balance between strategy allocations and manager selections. Doug Bratton and Caroline Cooley are primarily responsible for the macro decisions that determine the strategy allocations within the fund. Ms. Cooley models a manager's returns with a combination of hedge fund indices and asset class benchmarks. Their Albourne reports show a strong correlation of 0.80 between actual manager returns and expected returns.

John Cochran leads the effort to conduct the operational due diligence on all (prospective and current) managers.

Weaknesses:

Deloitte & Touche accompanied OPERS staff (January 2007) in evaluating operational controls and compliance activities that Crestline Investors and SEI Investments (Crestline's fund administrator) had built into their respective operations. It was noted that Crestline would need to do a better job of documenting its procedures for some of their operating procedures and proprietary applications.

It was also noted that Crestline did not encrypt its information prior to transmitting their files (portfolio and risk analytics) to its risk consultant, Albourne Partners. In subsequent conversations with Crestline, they mentioned that they are currently reviewing various encryption software programs.

Crestline is in the process of converting its client relationship management tool from PerTrac CMS to Backstop. Backstop is a transaction-based application that offers more flexibility and meets more of Crestline's needs. Crestline expected to complete the conversion during the first quarter of 2007. This conversion is still going on as Crestline is conducting parallel testing. Full integration will be completed over the next twelve months.

Investment Professional Biographies:

Doug Bratton, Principal and Senior Portfolio Manager
Years Experience: 10 years with company, 23 years in the industry
Education: B.S. North Carolina State University, M.B.A. Duke University

Caroline Cooley, Principal and Senior Portfolio Manager
Years Experience: 9 years with company, 22 years in the industry
Education: B.A. The College of William and Mary

John Cochran, Principal and CFO
Years Experience: 9 years with company, 18 years in the industry
Education: B.B.A. Texas Christian University

Jesús H. Payán, General Counsel and Chief Compliance Officer
Years Experience: < 1 year with company, 5 years in the industry
Education: J.D. University of Texas at Austin, School of Law

Stephen Ardizzoni, Senior Portfolio Analyst
Years Experience: 4 years with company, 12 years in the industry
Education: B.B.A. Texas Christian University

Glenn Bearden, Senior Portfolio Analyst
Years Experience: 6 years with company, 18 years in the industry
Education: B.B.A. University of Texas-Arlington

Randolph Nolan, Senior Portfolio Analyst
Years Experience: 5 years with company, 12 years in the industry
Education: B.A. The University of the South

Roger Marcincuk, Senior Operations Analyst
Years Experience: 3 years with company, 14 years in the industry
Education: B.S. Bentley College, M.B.A. Georgetown University

Appendix B

Pacific Alternative Asset Management Company
As of 3/31/07

Fund Objective

The Pacific Hedged Strategies, LLC (PHS) is a commingled fund for Non-ERISA U.S. Tax-Exempt institutional clients. The PHS is a multi-manager, moderate multi-strategy fund that targets a performance objective of LIBOR plus 500 to 600 basis points with a target standard deviation not to exceed 6%. This fund does not utilize leverage at the fund of hedge funds level.

Company Overview

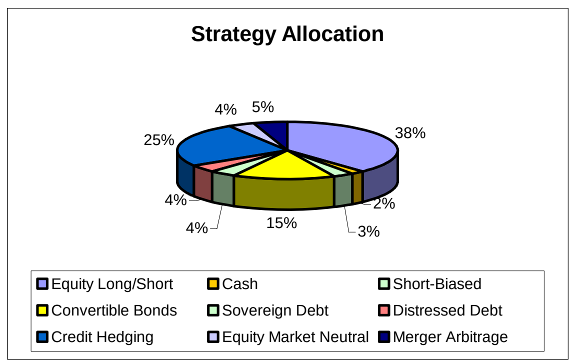
Pacific Alternative Asset Management Company, LLC (PAAMCO) started up in March 2000 as it was formed by its four founding partners (Jane Buchen, Judy Posnikoff, Jim Berens and Bill Knight). This team had worked together, since 1997, at Collins Associates, another fund of hedge funds manager.

PAAMCO has $8.4 billion in assets under management with over 90% of these assets coming from institutional investors. PAAMCO has two primary products: one is a multi-strategy (with eight sub-strategies) fund and the other is a market neutral (with five to six sub-strategies) fund.

Between direct fund investments and equity ownership in the firm, at least 90% of the four PAAMCO founding partners' net worth is directly linked to the success of PAAMCO and its investment vehicles. In addition, PAAMCO has five additional key personnel who are also equity owners of the firm.

Organizational Structure

General Partner:	PAAMCO LLC
Managers:	Jane Buchen, Jim Berens Judy Posnikoff, Bill Knight
Legal Counsel:	Kirkpatrick & Lockhart
Auditors:	Deloitte & Touche
Administrator:	Northern Trust & Forum Fund
Ownership:	Independent organization with female-majority ownership.
Employee ownership:	100%



Key Investment Terms

Target Return:	LIBOR + 500-600 bps
Target Standard Deviation:	6%
Minimum Investment:	$5 million (commingled)
Offering:	Monthly
Withdrawals:	Quarterly
Management Fee:	1.00% annually
Performance Fee:	None (for OPERS)
Lock-up Period:	One year
Assets in strategy:	$6.6 billion
Assets under management:	$8.4 billion

Period	PAAMCO *	S&P 500	Lehman Aggregate
YTD 2007 (3/31)	3.8%	0.6%	1.5%
2006	10.7%	15.8%	4.3%
2005	5.1%	4.9%	2.4%
2004	6.0%	9.2%	4.3%
2003	14.3%	26.4%	4.1%
2002	1.5%	-23.4%	10.3%

* Inception date was January 1, 2002 for this fund.
Returns are net of all fees.

Statistical Analysis
Last five years

	PAAMCO	S&P
Sharpe Ratio	1.6	0.3
Std Deviation	3.3%	12.3%
Beta	0.11	1.00
Correlation	0.40	
Best Month	2.5%	8.8%
Worst Month	-2.9%	-10.9%

Pacific Alternative Asset Management Company
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Irvine, California 92612
(949) 261-4900
www.paamco.com

Investment Philosophy and Process

PAAMCO's investment philosophy is slightly different from the other finalists in that they require position-level transparency from the hedge fund managers they select. As a result, their manager roster will look different from other fund of hedge fund managers, as several underlying hedge fund managers will not yield to this requirement. PAAMCO offsets this potential "shortage" by looking for new, start-up hedge fund managers. PAAMCO prefers to be an early investor in a hedge fund manager and they are willing to be the first dollar invested with a new hedge fund manager. The advantages to this approach are the ability to dictate terms (full position transparency, lock up future asset capacity) and invest with the hedge fund managers during their prime alpha-generating years.

One of this firm's strengths is their sector specialist approach to portfolio management. Judy Posnikoff, one of the founding partners and managing directors, specializes in the hedge fund strategies in the equity market neutral and merger arbitrage areas. Jim Berens, another founding partner and managing director, is the sector specialist for distressed debt and credit arbitrage strategies. The four founding partners and two other directors are responsible for forecasting the returns / performance within their respective strategies of expertise and identifying new hedge fund managers in their respective areas. Strategy allocations are ultimately approved by the Investment Committee.

PAAMCO has grown its assets under management and staff since our initial due diligence visit in July 2005. At that time, PAAMCO had total assets under management of $7.9 billion and total staff of 52 individuals. At the end of the first quarter 2007, PAAMCO had total assets under management of $8.4 billion and a total staff of 84 employees. PAAMCO is currently utilizing 60 underlying hedge fund managers in its moderate, multi-strategy platform.

Strengths:

The founding partners at PAAMCO are very knowledgeable and respected in the hedge fund space. Through direct and indirect reference checks, we heard this group described as "very bright" and "honorable" managers. All four of the founders have a teaching background and the knowledge-transfer benefits from PAAMCO to OPERS would be most beneficial.

Subsequent on-site meetings with PAAMCO have shown that an initial perceived weakness (lack of talent below the partner level) was a misjudgment. PAAMCO brings in experienced M.B.A.'s at the associate level and runs them through a program with an emphasis on risk management analysis for their first two years. From there, the staff members are selected up to the associate director level where they will begin to specialize in one of three areas: portfolio management, risk management or account management. Meetings with several associate directors have clearly demonstrated a deep knowledge of their respective expertise. PAAMCO opened an office in Singapore just to keep one of their talented and experienced associate directors.

Weaknesses:

Similar to some of the other finalists, their specific fund of hedge fund product had a limited history (inception date January 2002). Historical performance has been reasonable, but PAAMCO's low-risk and low return results may indicate this fund's future role as a bond-like substitute. However, PAAMCO did out perform all of the other fund of hedge fund finalists in 2006, except one (Crestline). In addition, PAAMCO beat the LIBOR + 400 basis points benchmark as well (10.66% versus 9.14%).

From inception date (May 1, 2006) through the end of March 2007, PAAMCO's return has slightly under performed relative to the performance benchmark (LIBOR + 400 basis points).

Investment Professional Biographies:

Jane Buchan, Managing Director and Chief Executive Officer
Years Experience: 7 years with company, 20 years in the industry
Education: B.A. Yale University, M.A. and Ph.D. from Harvard University

James Berens, Managing Director and chair of the Asset Allocation Committee
Years Experience: 7 years with company, 13 years in the industry
Education: B.A. University of Redlands, M.A. University of California, Ph.D. University of California

William Knight, Managing Director and chair of Investment Management Committee
Years Experience: 7 years with company, 24 years in the industry
Education: B.A. Vanguard University, M.A. California State University, Fullerton, Ph.D. University of California

Judith Posnikoff, Managing Director
Years Experience: 7 years with company, 11 years in the industry
Education: B.S. University of California, M.B.A. and M.A. and Ph.D. University of California

Charles Armendarez, Director and Co-Portfolio Manager of the Commingled Funds
Years Experience: 7 years with company, 11 years in the industry
Education: B.A. University of Southern California, M.B.A. Amos Tuck School at Dartmouth

Alper Ince, Director and Co-Portfolio Manager of the Commingled Funds
Years Experience: 5 years with company, 9 years in the industry
Education: B.S. METU Ankara (Turkey), M.B.A. University of Hartford

Philippe Jorion, Managing Director in Risk Management
Years Experience: 1 year with company, 15 years in the industry
Education: M.B.A. and Ph.D. University of Chicago

MEMORANDUM

To: Investment Committee
Ohio Public Employees Retirement System
From: Kristine L. Ford, CFA
Brady O'Connell, CFA
Christopher Riley
Date: May 1, 2007

Re: Opportunistic Fund – Increase to Hedge Fund of Funds Allocation

Staff has requested an increase to the hedge fund of funds allocation in the Opportunistic Fund. The increase proposed is an additional $50 million divided equally between the current managers, Crestline and PAAMCO. Increasing the allocation to the hedge fund of funds strategies is in keeping with the purpose and objective of the Opportunistic Fund. We will monitor this development closely as the next step would be to consider this strategy for a long term policy allocation in the Defined Benefit Fund. We support Staff's proposal.

Background

Crestline and PAAMCO were hired in early 2006. Since that time, both managers have performed in line with expectations (see table below). Importantly, both managers avoided the Amaranth situation where an individual hedge fund lost substantially all its value. The additional allocations are in line with the managers' client account size profiles, and with our view of the scalability of this type of investment. We continue to view these organizations favorably.

RETURN SUMMARY*
ENDING 3/31/2007

	Market Value (in thousands) as of 3/31/2007	First Quarter	Since Inception	Inception Date
Crestline	$27,400	4.0%	9.6%	3/31/06
Crestline Benchmark**		2.3	8.7	
PAAMCO	$26,895	4.9	7.6	5/31/06
PAAMCO Benchmark**		2.3	7.1	

*Returns are reported on a two month lag due to the timing of portfolio valuations
**Benchmark is the Libor (two month lag) + 400bps annually

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