

PROPOSAL – INTERNATIONAL EQUITY MANDATE

RECOMMENDED

That MFS Investment Management (“MFS”) be appointed as manager of an international equity mandate with a growth style, in replacement of Pyramis Global Advisors (“Pyramis”). MFS will manage 15% of the Diversified Equity Fund and 50% of the Non-North American Equity Fund.

BACKGROUND

The following analysis will compare MFS and Pyramis on the following aspects:

1. Performance
2. Risk
3. Risk-adjusted returns
4. Diversification benefits
5. Fees
6. Qualitative factors

1) Performance

The next two tables compare annual and annualized returns between Pyramis and Fidelity for periods ending February 29, 2012. The start date is September 2005, the first full month after Pyramis was hired¹.

Table 1

	Annual Returns (As of the end of February,)					
	2012	2011	2010	2009	2008	2007
Pyramis	-4.79%	12.43%	27.27%	-32.96%	-10.42%	22.11%
MSCI EAFE	-6.47%	10.65%	28.76%	-35.51%	-15.77%	24.75%
<i>Value added</i>	<i>1.68%</i>	<i>1.78%</i>	<i>-1.49%</i>	<i>2.55%</i>	<i>5.35%</i>	<i>-2.64%</i>
MFS	-0.07%	11.98%	30.25%	-28.34%	-14.14%	26.43%
MSCI EAFE	-6.47%	10.65%	28.76%	-35.51%	-15.77%	24.75%
<i>Value added</i>	<i>6.40%</i>	<i>1.33%</i>	<i>1.48%</i>	<i>7.17%</i>	<i>1.62%</i>	<i>1.68%</i>

¹ MFS’ performance from October 2007 to February 2012 is that of the MFS International Equity Canadian Pooled Fund, the same fund that is under consideration. From September 2005 to September 2007, a composite of international equity mandates was used.

Table 2

	Annualized Returns (As of February 29, 2012)						Since Inception (September 2005)
	1-Yr	2-Yr	3-Yr	4-Yr	5-Yr	6-Yr	
Pyramis	-4.79%	3.46%	10.86%	-2.24%	-3.93%	-0.01%	1.53%
MSCI EAFE	-6.47%	1.73%	10.04%	-3.72%	-6.26%	-1.69%	-0.06%
<i>Value added</i>	<i>1.68%</i>	<i>1.73%</i>	<i>0.81%</i>	<i>1.48%</i>	<i>2.33%</i>	<i>1.67%</i>	<i>1.59%</i>
MFS	-0.07%	5.78%	13.38%	1.09%	-2.16%	2.11%	3.51%
MSCI EAFE	-6.47%	1.73%	10.04%	-3.72%	-6.26%	-1.69%	-0.06%
<i>Value added</i>	<i>6.40%</i>	<i>4.05%</i>	<i>3.33%</i>	<i>4.81%</i>	<i>4.10%</i>	<i>3.80%</i>	<i>3.57%</i>

Looking at annual returns, Pyramis outperformed the MSCI EAFE Index four years out of six, while MFS outperformed in every year. For the entire period under consideration, MFS has generated 357 bps of value added annualized (before fees), while Pyramis has added 159 bps.

2) Risk

The following measures of risk will be reviewed:

- Standard deviation of returns: measures the volatility of returns around the mean return.
- Semi-standard deviation: measures the volatility of returns around 0%, but only for those returns that are negative.
- Beta: measures the risk of the fund in comparison to the market as a whole. A beta greater than 1 means that the fund is riskier than the market, while a beta smaller than 1 means that the fund is less risky than the market.
- Drawdown: measures the maximum decline, from peak to trough, experienced by a fund over a given period.

Table 3

	Standard Deviation (As of February 29, 2012)			
	3-Yr	4-Yr	5-Yr	Since Inception
Pyramis	12.55%	15.83%	14.80%	14.36%
MFS	13.18%	16.43%	15.22%	14.52%
MSI EAFE	13.02%	16.48%	15.20%	14.62%

Table 3 compares the standard deviation of returns between Pyramis and MFS over various horizons. Pyramis' returns have been slightly less volatile than MFS and the MSCI EAFE benchmark over various horizons, while MFS' volatility has been in line with the benchmark.

Table 4

	Semi-Standard Deviation (As of February 29, 2012)			
	3-Yr	4-Yr	5-Yr	Since Inception
Pyramis	7.44%	12.31%	11.76%	10.57%
MFS	7.67%	11.97%	11.32%	10.13%
MSI EAFE	7.80%	12.96%	12.25%	10.98%

Table 4 looks at the semi-standard deviation, i.e. the standard deviation applied to negative returns only. The analysis shows that for most horizons that MFS has a lower semi-standard deviation than Pyramis, which means that its returns have less downside risk. Both Pyramis and MFS' semi-standard deviations are smaller than the benchmark.

Table 5

	Beta (As of February 29, 2012)			
	3-Yr	4-Yr	5-Yr	Since Inception
Pyramis	0.95	0.95	0.96	0.97
MFS	0.95	0.95	0.95	0.94
MSI EAFE	1.00	1.00	1.00	1.00

Table 5 compares the betas for Pyramis, MFS and the MSCI EAFE. Pyramis and MFS have similar systematic risk and they're both less volatile than the market.

Table 6

	Drawdown (As of February 29, 2012)						
	2012	2011	2010	2009	2008	2007	Since Inception
Pyramis	-15.26%	-10.50%	-1.02%	-40.82%	-11.47%	-5.46%	-40.82%
MFS	-15.02%	-11.30%	-0.48%	-38.92%	-15.05%	-4.89%	-38.92%
MSI EAFE	-14.76%	-12.27%	-1.06%	-46.19%	-15.65%	-5.56%	-46.19%

Table 6 shows the maximum decline from peak to trough for various years ending at the end of February and over the period from September 2005 to February 2012. The results have been similar between Pyramis and MFS, with MFS having a lower drawdown in four of the six years, including during the financial crisis of 2008-2009. Pyramis has a much better drawdown in 2008. Both managers have dropped less than the benchmark during the financial crisis.

3) Risk-Adjusted Returns

The following measures of risk-adjusted returns will be reviewed:

- Sharpe ratio: measures the excess return over the risk-free rate by unit of total volatility.
- Information ratio: measures a portfolio manager's ability to generate excess returns relative to a benchmark, but also attempts to identify consistency.
- Capture ratios: measure how well a manager does when the market is going up and when the market is going down. A capture ratio greater than 100% when the market is up is preferred and a capture ratio smaller than 100% when the market is down is preferred.

Table 7

	Sharpe Ratio (As of February 29, 2012)			
	3-Yr	4-Yr	5-Yr	Since Inception
Pyramis	0.81	-0.22	-0.39	-0.16
MFS	0.96	-0.01	-0.26	-0.01
MSI EAFE	0.72	-0.30	-0.53	-0.27
R_f	0.69%	1.21%	1.86%	2.29%

Table 7 compares the Sharpe ratios of Pyramis, MFS and the MSCI EAFE over various horizons. The Sharpe ratio is only meaningful when the manager's return is greater than the risk-free rate. This occurs only for the three-year period. MFS has outperformed both Pyramis and the benchmark. Pyramis has also done better than the benchmark, based on the Sharpe ratio.

Table 8

	Information Ratio (As of February 29, 2012)			
	3-Yr	4-Yr	5-Yr	Since Inception
Pyramis	0.42	0.69	1.03	0.74
MFS	0.75	0.98	0.84	0.85

Table 8 compares the Information Ratio of Pyramis and MFS. MFS has achieved a higher information ratio over three and four year horizons and over the entire period, while Pyramis had a better information ratio over the five-year horizon. A higher information ratio indicates a higher persistency of outperformance.

Table 9

	Capture Ratios (As of February 29, 2012)					
	3-Yr		5-Yr		Since Inception	
	Up	Down	Up	Down	Up	Down
Pyramis	95.7%	91.2%	97.6%	91.6%	98.2%	92.1%
MFS	104.2%	93.4%	109.1%	89.8%	106.0%	89.3%

Table 9 compares the up and down capture ratios between Pyramis and MFS. For each period, MFS has up capture ratios greater and 100% and down capture ratios smaller than 100%. This means that MFS tends to outperform its benchmark both when the market is going up and when the market is going down. Pyramis has down capture ratios smaller than 100%, but up capture ratios smaller than 100%. This means that although Pyramis tends to outperform its benchmark when the market is going down, it also lags the market when it's going up.

4) Diversification Benefits

The correlation of returns and the correlation of excess returns (fund return minus benchmark returns) between Pyramis and AllianceBernstein will be compared to the correlation between MFS and AllianceBernstein. AllianceBernstein is the existing international equity manager with a value investment style. The goal is to have correlation coefficients as low as possible between the value and the growth managers in order to generate the most synergies.

Table 10

	Correlation of Returns		
	Pyramis	MFS	Alliance Bernstein
Pyramis	1.00		
MFS	0.94	1.00	
Alliance Bernstein	0.96	0.90	1.00

Table 10 compares the correlation of returns between Pyramis, MFS and AllianceBernstein over the period from September 2005 to February 2012. Although both Pyramis and MFS are highly correlated with AllianceBernstein, MFS has a slightly lower correlation coefficient than Pyramis at 0.90 compared to 0.96, indicating superior diversification potential.

Table 11

	Correlation of Excess Returns		
	Pyramis	MFS	Alliance Bernstein
Pyramis	1.00		
MFS	0.02	1.00	
Alliance Bernstein	-0.06	-0.35	1.00

Table 11 compares the correlation of excess returns between Pyramis, MFS and AllianceBernstein over the period from September 2005 to February 2012. MFS has a much lower correlation coefficient with AllianceBernstein than Pyramis at -0.35 versus -0.06 for Pyramis.

5) Fees

Pyramis currently manages approximately \$77.3 million for the Western Retirement Plans as of February 29, 2012. At that asset level, investment management fees for Pyramis are about 0.70%. With the same asset base, MFS would charge 0.65% in investment management fees. In addition, MFS has confirmed that they would commingle the assets managed for Western Operating & Endowment Fund with those managed for the Western Retirement Plans for the purpose of calculating investment management fees. Given that MFS manages \$54.3 million for the Operating & Endowment Fund, this translates into an investment management fee of 0.56%, 0.14% lower than Pyramis.

6) Qualitative Factors

A number of qualitative factors need to be assessed as well:

- Russell's ranking: Currently Pyramis is ranked Review by Russell, while MFS is ranked Hire. Russell's Review ranking of Pyramis is based on concerns over the excess return potential of the strategy, organizational changes, analyst turnover and assets under management. The Review ranking on Pyramis creates two issues for Western. First, Russell provides limited research and monitoring on those managers that are ranked Review, compared to those that are ranked Hire. In addition, from a governance point of view it is not desirable to keep for an extended period of time a manager that our investment consultant has a low opinion of.
- MFS has a more focused portfolio: MFS' portfolio holds 60 to 70 stocks, compared to close to 400 for the portfolio managed by Pyramis (approximately 200 in the developed market component and 200 in the emerging markets component). Given that the international equity managers only manage a sleeve in the Diversified Equity Fund and the Non-North American Equity Fund, a too large number of holdings means that the individual stocks have little impact on the performance of the overall portfolio. For example, on average stocks from developed markets in the Pyramis portfolio have a weight of less than 0.5%, which means that they represent on average less than 0.075% of the Diversified Equity Fund. Even if the stock doubles, it would only increase the return of the Diversified Equity Fund by 8 bps.

- Personnel turnover: Pyramis has experienced a reduction in the total number of analysts at the firm. In addition, there have been two portfolio managers for both the Japanese and the Pacific Basin components of the portfolio over the past two years.
- MFS has confirmed that they can meet the Western Retirement Plans monthly cash flow process, i.e. accepting trade orders on the fourth last business day of the month for settlement on the last business day of the month.
- The University currently has relationships with 18 different managers when the Retirement Plans and the Operating & Endowment Fund are combined. Reducing the number of managers would reduce operational risk.

CONCLUSION

In summary, even though there are no major issues with Pyramis that would force the Western Retirement Plans to terminate them, the presence of a much better alternative on the Western Operating & Endowment Fund should be taken advantage of.

MFS is a better choice for the Western Retirement Plans for an international equity mandate for the following reasons:

- Better value added generated
- Lower downside risk
- Better Sharpe Ratio
- Better Information Ratio
- Better up and down capture ratios
- Lower correlation of returns and excess returns with AllianceBernstein, the existing international equity value manager
- Lower fees than Pyramis by 0.14%
- Russell's ranking of Hire compared to Review
- Better fit for the Western Retirement Plans in terms of portfolio concentration
- More stable organization from a personnel turnover point of view