Plymouth County Retirement Association

Investment Update
July 25, 2018

Agenda

1. **June Interim Update**

2. **Emerging Market Respondent Review**

3. **Disclaimer, Glossary, and Notes**

Interim Update

Asset Class Net Performance Summary

	Market Value ($)	% of Portfolio	1 Mo (%)	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	15 Yrs (%)	Inception (%)	Inception Date
Total Retirement Association	**978,716,224**	**100.0**	**-0.6**	**0.4**	**0.3**	**8.0**	**6.5**	**7.6**	**5.8**	**7.3**	**8.0**	**Nov-89**
Custom Benchmark - Policy Benchmark			*0.2*	*0.8*	*1.4*	*10.1*	*7.8*	*8.7*	*7.3*	--	--	*Nov-89*
Domestic Equity Assets	**259,697,871**	**26.5**	**1.0**	**6.4**	**5.4**	**15.7**	**--**	**--**	**--**	**--**	**16.2**	**Jan-16**
Russell 3000			*0.7*	*3.9*	*3.2*	*14.8*	*11.6*	*13.3*	*10.2*	*9.6*	*14.7*	*Jan-16*
International Developed Market Equity Assets	**161,817,046**	**16.5**	**-1.9**	**-2.1**	**-3.3**	**7.4**	**--**	**--**	**--**	**--**	**9.5**	**Jan-16**
MSCI EAFE			*-1.2*	*-1.2*	*-2.7*	*6.8*	*4.9*	*6.4*	*2.8*	*7.3*	*8.6*	*Jan-16*
International Emerging Market Equity Assets	**93,830,763**	**9.6**	**-4.7**	**-7.9**	**-6.1**	**8.0**	**--**	**--**	**--**	**--**	**13.9**	**Jan-16**
MSCI Emerging Markets			*-4.2*	*-8.0*	*-6.7*	*8.2*	*5.6*	*5.0*	*2.3*	*10.7*	*15.2*	*Jan-16*
Global Equity Assets	**96,331,555**	**9.8**	**-1.2**	**-1.2**	**--**	**--**	**--**	**--**	**--**	**--**	**-5.5**	**Feb-18**
MSCI ACWI			*-0.5*	*0.5*	*-0.4*	*10.7*	*8.2*	*9.4*	*5.8*	*8.2*	*-5.8*	*Feb-18*
Domestic Fixed Income	**70,783,312**	**7.2**	**0.0**	**0.0**	**-1.2**	**0.2**	**--**	**--**	**--**	**--**	**2.4**	**Jan-16**
75% Bbg Barclays Aggregate/25% Bbg Barclays US TIPs 1-10 year			*0.0*	*0.0*	*-1.2*	*0.1*	*1.7*	*2.0*	--	--	*2.0*	*Jan-16*
Value Added Fixed Income	**72,376,491**	**7.4**	**0.1**	**0.5**	**0.8**	**2.6**	**--**	**--**	**--**	**--**	**7.1**	**Jan-16**
50% BBgBarc US High Yield/ 50% Credit Suisse Leveraged Loans			*0.3*	*0.9*	*1.3*	*3.6*	*4.9*	*4.9*	*6.6*	*6.3*	*8.2*	*Jan-16*
International Fixed Income	**35,967,562**	**3.7**	**-1.7**	**-4.7**	**-2.4**	**2.2**	**--**	**--**	**--**	**--**	**6.1**	**Jan-16**
Custom Benchmark - Global Fixed Income			*-1.2*	*-3.5*	*-5.2*	*-1.5*	*3.8*	*3.3*	--	--	*4.6*	*Jan-16*
Hedge Fund	**40,333,564**	**4.1**	**-0.6**	**0.1**	**-1.1**	**3.0**	**3.4**	**5.0**	**--**	**--**	**4.8**	**Feb-10**
HFRI Fund of Funds Composite Index			*-0.3*	*0.8*	*1.0*	*5.5*	*2.0*	*3.5*	*1.4*	*3.5*	*3.1*	*Feb-10*
Real Estate	**87,830,148**	**9.0**	**0.7**	**1.5**	**0.8**	**3.2**	**--**	**--**	**--**	**--**	**3.9**	**Jan-16**
NCREIF ODCE			*2.0*	*2.0*	*4.3*	*8.4*	*9.4*	*11.0*	*5.3*	*8.3*	*8.3*	*Jan-16*
Private Equity	**36,215,305**	**3.7**	**0.0**	**0.0**	**6.8**	**17.7**	**--**	**--**	**--**	**--**	**6.9**	**Jan-16**
Cambridge Associates Fund of Funds Composite 1-Quarter Lag			*3.2*	*3.2*	*7.1*	*15.5*	*10.2*	*11.9*	*7.9*	*11.7*	*9.9*	*Jan-16*
Real Assets	**21,564,899**	**2.2**	**0.0**	**0.0**	**-2.7**	**-2.0**	**--**	**--**	**--**	**--**	**-4.0**	**Jan-16**
CPI+3%			*0.4*	*1.3*	*2.7*	*5.8*	*4.8*	*4.5*	*4.4*	*5.1*	*5.2*	*Jan-16*
Cash and Cash Equivalent	**1,967,707**	**0.2**										

June performance data for private market investments is not yet available.

Trailing Net Performance

	Market Value ($)	% of Portfolio	% of Sector	1 Mo (%)	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Total Retirement Association	**978,716,224**	**100.0**	**--**	**-0.6**	**0.4**	**0.3**	**8.0**	**6.5**	**7.6**	**5.8**	**8.0**	**Nov-89**
Custom Benchmark - Policy Benchmark				*0.2*	*0.8*	*1.4*	*10.1*	*7.8*	*8.7*	*7.3*	*--*	*Nov-89*
Domestic Equity Assets	**259,697,871**	**26.5**	**26.5**	**1.0**	**6.4**	**5.4**	**15.7**	**--**	**--**	**--**	**16.2**	**Jan-16**
Russell 3000				*0.7*	*3.9*	*3.2*	*14.8*	*11.6*	*13.3*	*10.2*	*14.7*	*Jan-16*
Rhumbline Russell 1000 Value	32,866,550	3.4	12.7	0.2	1.2	-1.7	6.6	8.1	10.2	--	10.2	Apr-13
Russell 1000 Value				*0.2*	*1.2*	*-1.7*	*6.8*	*8.3*	*10.3*	*8.5*	*10.3*	*Apr-13*
Rhumbline Russell 1000 Growth	56,712,912	5.8	21.8	1.0	5.8	7.3	22.3	14.9	16.2	--	16.0	Jul-09
Russell 1000 Growth				*1.0*	*5.8*	*7.3*	*22.5*	*15.0*	*16.4*	*11.8*	*16.1*	*Jul-09*
Fisher Midcap Value	44,562,308	4.6	17.2	0.2	3.0	1.0	11.7	10.9	11.2	9.2	7.9	Apr-07
Russell MidCap Value				*0.8*	*2.4*	*-0.2*	*7.6*	*8.8*	*11.3*	*10.1*	*7.2*	*Apr-07*
Boston Company Small Cap Growth	50,797,210	5.2	19.6	1.8	13.2	16.7	30.1	12.7	15.9	--	16.0	Aug-09
Russell 2000 Growth				*0.8*	*7.2*	*9.7*	*21.9*	*10.6*	*13.6*	*11.2*	*15.4*	*Aug-09*
LMCG Small Cap Value	74,741,606	7.6	28.8	1.3	7.3	2.9	8.9	10.2	11.0	--	9.7	Mar-11
Russell 2000 Value				*0.6*	*8.3*	*5.4*	*13.1*	*11.2*	*11.2*	*9.9*	*10.3*	*Mar-11*
International Developed Market Equity Assets	**161,817,046**	**16.5**	**16.5**	**-1.9**	**-2.1**	**-3.3**	**7.4**	**--**	**--**	**--**	**9.5**	**Jan-16**
MSCI EAFE				*-1.2*	*-1.2*	*-2.7*	*6.8*	*4.9*	*6.4*	*2.8*	*8.6*	*Jan-16*
KBI Master Account	75,674,637	7.7	46.8	-0.9	-2.4	-4.5	3.4	2.9	5.1	2.0	4.0	Jul-05
MSCI EAFE				*-1.2*	*-1.2*	*-2.7*	*6.8*	*4.9*	*6.4*	*2.8*	*4.9*	*Jul-05*
HGK TS International Equity	47,685,099	4.9	29.5	-2.2	-2.0	-1.2	10.6	7.6	9.2	--	7.3	Feb-11
MSCI EAFE				*-1.2*	*-1.2*	*-2.7*	*6.8*	*4.9*	*6.4*	*2.8*	*4.6*	*Feb-11*
Copper Rock International Small Cap	38,457,310	3.9	23.8	-3.3	-1.5	-3.3	--	--	--	--	-1.7	Nov-17
MSCI EAFE Small Cap				*-1.9*	*-1.6*	*-1.3*	*12.4*	*10.1*	*11.3*	*6.8*	*1.3*	*Nov-17*

Total Retirement Association

As of June 30, 2018

	Market Value ($)	% of Portfolio	% of Sector	1 Mo (%)	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
International Emerging Market Equity Assets	**93,830,763**	**9.6**	**9.6**	**-4.7**	**-7.9**	**-6.1**	**8.0**	**--**	**--**	**--**	**13.9**	**Jan-16**
MSCI Emerging Markets				*-4.2*	*-8.0*	*-6.7*	*8.2*	*5.6*	*5.0*	*2.3*	*15.2*	*Jan-16*
LMCG Emerging Markets	93,830,763	9.6	100.0	-4.7	-7.9	-6.1	8.0	4.5	--	--	2.8	Sep-13
MSCI Emerging Markets				*-4.2*	*-8.0*	*-6.7*	*8.2*	*5.6*	*5.0*	*2.3*	*4.0*	*Sep-13*
Global Equity Assets	**96,331,555**	**9.8**	**9.8**	**-1.2**	**-1.2**	**--**	**--**	**--**	**--**	**--**	**-5.5**	**Feb-18**
MSCI ACWI				*-0.5*	*0.5*	*-0.4*	*10.7*	*8.2*	*9.4*	*5.8*	*-5.8*	*Feb-18*
First Eagle Global Value Fund	19,058,250	1.9	19.8	-1.0	0.1	--	--	--	--	--	-4.7	Feb-18
MSCI ACWI				*-0.5*	*0.5*	*-0.4*	*10.7*	*8.2*	*9.4*	*5.8*	*-5.8*	*Feb-18*
Kopernik Global All Cap Fund	18,757,634	1.9	19.5	-1.4	-2.4	--	--	--	--	--	-6.2	Feb-18
MSCI ACWI				*-0.5*	*0.5*	*-0.4*	*10.7*	*8.2*	*9.4*	*5.8*	*-5.8*	*Feb-18*
Lee Munder Global Multi-Cap Strategy	28,240,477	2.9	29.3	-0.1	1.5	--	--	--	--	--	-0.8	Mar-18
MSCI ACWI				*-0.5*	*0.5*	*-0.4*	*10.7*	*8.2*	*9.4*	*5.8*	*-1.6*	*Mar-18*
Wellington Durable Enterprises, L.P.	30,275,194	3.1	31.4	-0.8	0.8	--	--	--	--	--	0.9	Mar-18
MSCI ACWI				*-0.5*	*0.5*	*-0.4*	*10.7*	*8.2*	*9.4*	*5.8*	*-1.6*	*Mar-18*

	Market Value ($)	% of Portfolio	% of Sector	1 Mo (%)	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Domestic Fixed Income	**70,783,312**	**7.2**	**7.2**	**0.0**	**0.0**	**-1.2**	**0.2**	**--**	**--**	**--**	**2.4**	**Jan-16**
75% Bbg Barclays Aggregate/25% Bbg Barclays US TIPs 1-10 year				*0.0*	*0.0*	*-1.2*	*0.1*	*1.7*	*2.0*	*--*	*2.0*	*Jan-16*
IR&M Core Bonds	70,783,312	7.2	100.0	0.0	0.0	-1.2	0.1	1.8	2.2	3.4	4.0	Nov-04
75% Bbg Barclays Aggregate/25% Bbg Barclays US TIPs 1-10 year				*0.0*	*0.0*	*-1.2*	*0.1*	*1.7*	*2.0*	*--*	*--*	*Nov-04*
Value Added Fixed Income	**72,376,491**	**7.4**	**7.4**	**0.1**	**0.5**	**0.8**	**2.6**	**--**	**--**	**--**	**7.1**	**Jan-16**
50% BBgBarc US High Yield/ 50% Credit Suisse Leveraged Loans				*0.3*	*0.9*	*1.3*	*3.6*	*4.9*	*4.9*	*6.6*	*8.2*	*Jan-16*
Eaton Vance High Yield	37,436,557	3.8	51.7	0.2	0.6	-0.2	1.6	4.8	5.4	7.5	6.9	Apr-06
ICE BofAML High Yield Master TR				*0.3*	*1.0*	*0.1*	*2.5*	*5.6*	*5.5*	*8.0*	*7.3*	*Apr-06*
THL Bank Loan Select Fund	34,939,934	3.6	48.3	0.0	0.5	1.8	3.6	4.8	4.7	--	5.6	Sep-10
Credit Suisse Leveraged Loans				*0.1*	*0.8*	*2.4*	*4.7*	*4.3*	*4.2*	*5.0*	*5.0*	*Sep-10*
International Fixed Income	**35,967,562**	**3.7**	**3.7**	**-1.7**	**-4.7**	**-2.4**	**2.2**	**--**	**--**	**--**	**6.1**	**Jan-16**
Custom Benchmark - Global Fixed Income				*-1.2*	*-3.5*	*-5.2*	*-1.5*	*3.8*	*3.3*	*--*	*4.6*	*Jan-16*
Franklin Templeton Emerging Market Bonds	35,967,562	3.7	100.0	-1.7	-4.7	-2.4	2.9	5.4	4.1	6.1	6.9	May-06
JP Morgan EMBI Global Diversified				*-1.2*	*-3.5*	*-5.2*	*-1.6*	*4.6*	*5.1*	*6.7*	*6.9*	*May-06*
Hedge Fund	**40,333,564**	**4.1**	**4.1**	**-0.6**	**0.1**	**-1.1**	**3.0**	**3.4**	**5.0**	**--**	**4.8**	**Feb-10**
HFRI Fund of Funds Composite Index				*-0.3*	*0.8*	*1.0*	*5.5*	*2.0*	*3.5*	*1.4*	*3.1*	*Feb-10*
ABS Offshore SPC - Global Segregated Portfolio	21,515,906	2.2	53.3	-1.2	0.3	1.0	6.4	2.8	5.6	--	5.8	Aug-10
HFRI Fund of Funds Composite Index				*-0.3*	*0.8*	*1.0*	*5.5*	*2.0*	*3.5*	*1.4*	*3.3*	*Aug-10*
Entrust Special Opportunities Fund III, Ltd.	18,817,658	1.9	46.7	0.0	0.0	-3.6	-0.4	--	--	--	17.8	Oct-16
HFRI Fund of Funds Composite Index				*-0.3*	*0.8*	*1.0*	*5.5*	*2.0*	*3.5*	*1.4*	*5.5*	*Oct-16*

Total Retirement Association

As of June 30, 2018

	Market Value ($)	% of Portfolio	% of Sector	1 Mo (%)	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Real Estate	**87,830,148**	**9.0**	**9.0**	**0.7**	**1.5**	**0.8**	**3.2**	**--**	**--**	**--**	**3.9**	**Jan-16**
NCREIF ODCE				*2.0*	*2.0*	*4.3*	*8.4*	*9.4*	*11.0*	*5.3*	*8.3*	*Jan-16*
Core Real Estate	**68,085,834**	**7.0**	**77.5**	**0.9**	**1.9**	**0.7**	**4.3**	**7.9**	**9.2**	**2.7**	**--**	
PRISA I	38,247,254	3.9	56.2	0.0	0.0	1.7	5.1	8.6	10.3	3.5	6.6	Sep-04
Invesco REIT	16,310,912	1.7	24.0	3.9	7.0	1.0	5.1	8.2	8.3	8.0	11.3	Dec-02
Wilshire REIT				*4.5*	*9.7*	*1.5*	*3.9*	*7.8*	*8.4*	*7.8*	*10.6*	*Dec-02*
TA Realty Core Property Fund, L.P.	13,527,668	1.4	19.9	0.0	0.0	--	--	--	--	--	0.0	Mar-18
Non-Core Real Estate	**19,744,314**	**2.0**	**22.5**	**0.0**	**0.0**	**1.8**	**-1.5**	**--**	**--**	**--**	**-3.7**	**Jan-16**
Mesirow Financial International Real Estate Fund I	4,014,981	0.4	20.3									
DSF Multi-Family Real Estate Fund III	7,242,586	0.7	36.7									
AEW Partners Real Estate VIII	4,616,535	0.5	23.4									
DSF Capital Partners IV	2,108,546	0.2	10.7									
Hunt Redevelopment & Renovation	160,896	0.0	0.8									
1921 Realty, Inc	930,409	0.1	4.7									
New Boston Institutional Fund, LP VII	341,364	0.0	1.7									
Berkshire Multfamily Value Fund II	98,968	0.0	0.5									
Carlyle Realty Partners VIII	186,002	0.0	0.9									
Intercontinental Real Estate Investment Fund III	44,027	0.0	0.2									

Total Retirement Association

As of June 30, 2018

	Market Value ($)	% of Portfolio	% of Sector	1 Mo (%)	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Private Equity	**36,215,305**	**3.7**	**3.7**	**0.0**	**0.0**	**6.8**	**17.7**	**--**	**--**	**--**	**6.9**	**Jan-16**
Cambridge Associates Fund of Funds Composite 1-Quarter Lag				*3.2*	*3.2*	*7.1*	*15.5*	*10.2*	*11.9*	*7.9*	*9.9*	*Jan-16*
Private Equity General	**26,625,254**	**2.7**	**73.5**									
Euro Choice V Programme	5,481,828	0.6	20.6									
Lexington Capital Partners VII	3,171,688	0.3	11.9									
TRG Growth Partnership II	2,526,517	0.3	9.5									
Landmark Equity Partners XIV	1,554,751	0.2	5.8									
Summit Partners Growth Equity Fund IX	3,642,975	0.4	13.7									
Leeds Equity Partners V	2,131,132	0.2	8.0									
Audax Mezzaine Debt IV	1,997,681	0.2	7.5									
Siguler Guff Distressed Opportunities Fund III, LP	1,008,722	0.1	3.8									
Mesirow Financial Capital Partners IX, LP	315,830	0.0	1.2									
Leeds Equity Partners IV	1,006,302	0.1	3.8									
DN Partners II, LP	903,830	0.1	3.4									
Euro Choice II	170,561	0.0	0.6									
RIMCO Royalty Partners, LP	159,083	0.0	0.6									
Charles River Partnership XI	98,303	0.0	0.4									
LLR Equity Partners V, LP.	956,052	0.1	3.6									
Trilantic Capital Partners, L.P.	1,500,000	0.2	5.6									

June performance data for private market investments is not yet available.

Total Retirement Association

As of June 30, 2018

	Market Value ($)	% of Portfolio	% of Sector	1 Mo (%)	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Venture Capital	**9,590,051**	**1.0**	**26.5**									
Ascent Ventures V	4,319,630	0.4	45.0									
Globespan Capital V	4,789,429	0.5	49.9									
Ascend Ventures II	118,265	0.0	1.2									
Ascent Ventures IV	362,727	0.0	3.8									
Real Assets	**21,564,899**	**2.2**	**2.2**	**0.0**	**0.0**	**-2.7**	**-2.0**	**--**	**--**	**--**	**-4.0**	**Jan-16**
CPI+3%				*0.4*	*1.3*	*2.7*	*5.8*	*4.8*	*4.5*	*4.4*	*5.2*	*Jan-16*
JP Morgan Global Maritime Investment	6,499,289	0.7	30.1									
Timbervest Partners III, LP	5,123,217	0.5	23.8									
BTG Pactual Global Timberland Resources	3,434,841	0.4	15.9									
Global Infrastructure Partners III	5,183,559	0.5	24.0									
Basalt Infrastructure Partners II	1,323,993	0.1	6.1									
Cash and Cash Equivalent	**1,967,707**	**0.2**	**0.2**									
Cash	1,967,707	0.2	100.0									

Total Retirement Association

As of June 30, 2018

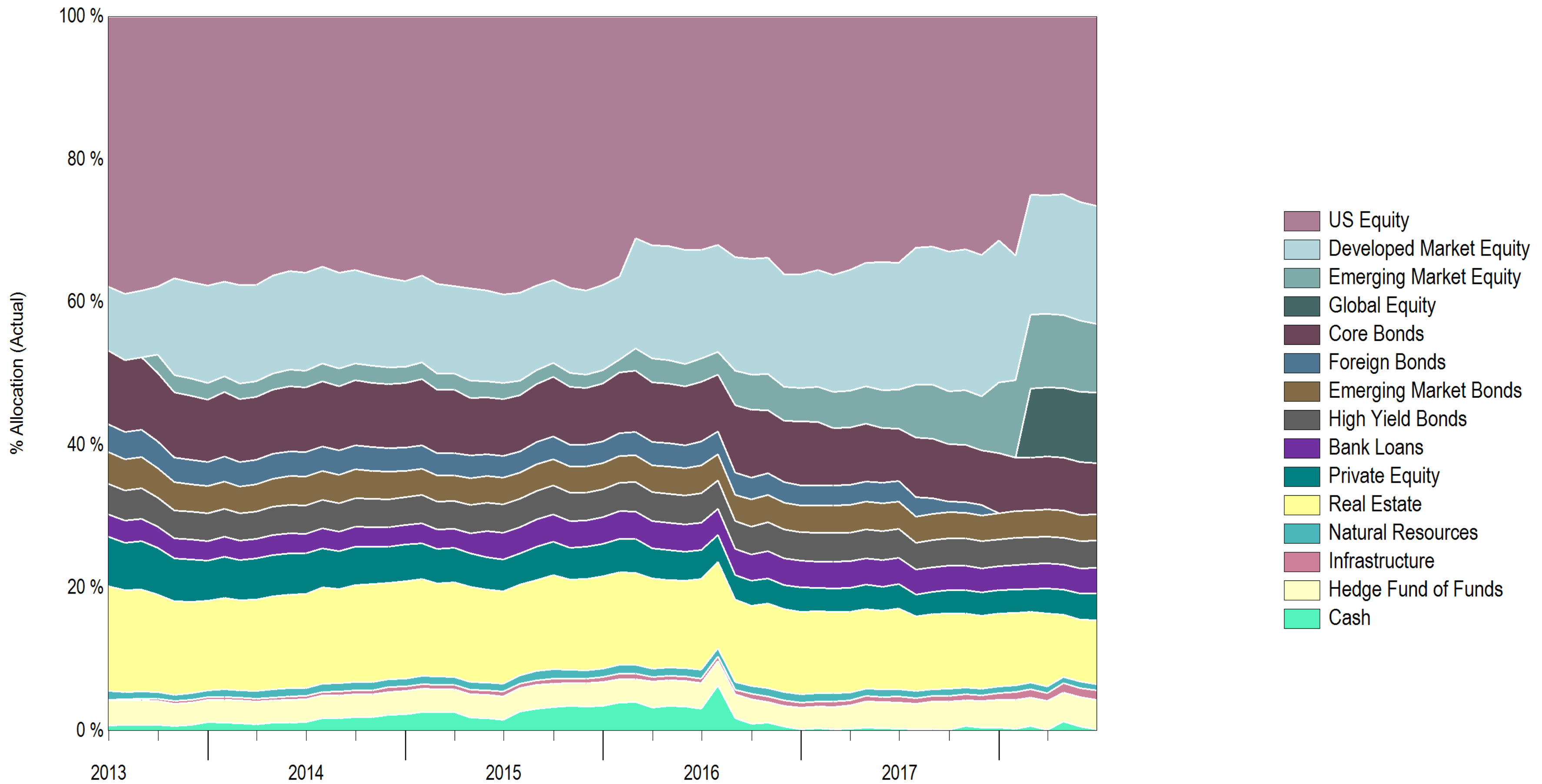
Allocation vs. Target

	Current Balance	Current Allocation	Policy	Policy Range	Within IPS Range?
US Equity	$259,697,871	27%	26%	21% - 31%	Yes
Developed Market Equity	$161,817,046	17%	6%	1% - 16%	No
Emerging Market Equity	$93,830,763	10%	10%	5% - 20%	Yes
Global Equity	$96,331,555	10%	10%	5% - 20%	Yes
Core Bonds	$70,783,312	7%	9%	4% - 14%	Yes
Emerging Market Bonds	$35,967,562	4%	2%	0% - 7%	Yes
High Yield Bonds	$37,436,557	4%	2%	0% - 7%	Yes
Bank Loans	$34,939,934	4%	2%	0% - 7%	Yes
Private Equity	$36,215,305	4%	13%	8% - 18%	No
Real Estate	$87,830,148	9%	10%	5% - 15%	Yes
Natural Resources	$8,558,058	1%	2%	0% - 4%	Yes
Infrastructure	$13,006,840	1%	4%	2% - 6%	No
Hedge Fund of Funds	$40,333,564	4%	4%	2% - 6%	Yes
Cash	$1,967,707	0%	0%	0% - 3%	Yes
Total	**$978,716,224**	**100%**	**100%**		

	Current Balance	Current Allocation	Policy	Policy Range	Within IPS Range?
Total Equity	$688,226,106	70%	69%	60% - 80%	Yes
Total Fixed Income	$179,127,365	18%	15%	5% - 25%	Yes
Total Real Assets	$109,395,047	11%	16%	13% - 19%	No
Cash	$1,967,707	0%	0%	0% - 3%	Yes

Plymouth County Retirement Association adopted a new asset allocation as of May 2017.

Asset Allocation History
5 Years Ending June 30, 2018



Annual Investment Expense Analysis
As Of June 30, 2018

Name	Fee Schedule	Market Value	Estimated Fee Value	Estimated Fee
Domestic Equity Assets		**$259,697,871**		
Rhumbline Russell 1000 Value	0.05% of First 25.0 Mil, 0.04% of Next 25.0 Mil, 0.03% Thereafter	$32,866,550	$15,647	0.05%
Rhumbline Russell 1000 Growth	0.05% of First 25.0 Mil, 0.04% of Next 25.0 Mil, 0.03% Thereafter	$56,712,912	$24,514	0.04%
Fisher Midcap Value	0.80% of First 25.0 Mil, 0.75% of Next 25.0 Mil, 0.67% Thereafter	$44,562,308	$346,717	0.78%
Boston Company Small Cap Growth	0.45% of Assets	$50,797,210	$228,587	0.45%
LMCG Small Cap Value	0.90% of Assets	$74,741,606	$672,674	0.90%
International Developed Market Equity Assets		**$161,817,046**		
KBI Master Account	0.65% of Assets	$75,674,637	$491,885	0.65%
HGK TS International Equity	1.00% of Assets	$47,685,099	$476,851	1.00%
Copper Rock International Small Cap	0.85% of Assets	$38,457,310	$326,887	0.85%
International Emerging Market Equity Assets		**$93,830,763**		
LMCG Emerging Markets	0.75% of Assets	$93,830,763	$703,731	0.75%
Global Equity Assets		**$96,331,555**		
First Eagle Global Value Fund	0.75% of Assets	$19,058,250	$142,937	0.75%
Kopernik Global All Cap Fund	0.80% of First 50.0 Mil, 0.75% of Next 150.0 Mil, 0.70% of Next 250.0 Mil, 0.65% of Next 350.0 Mil	$18,757,634	$150,061	0.80%
Lee Munder Global Multi-Cap Strategy	0.45% of Assets	$28,240,477	$127,082	0.45%
Wellington Durable Enterprises, L.P.	0.60% of Assets	$30,275,194	$181,651	0.60%
Domestic Fixed Income		**$70,783,312**		
IR&M Core Bonds	0.25% of First 50.0 Mil, 0.20% of Next 50.0 Mil, 0.15% Thereafter	$70,783,312	$166,567	0.24%
Value Added Fixed Income		**$72,376,491**		
Eaton Vance High Yield	0.50% of Assets	$37,436,557	$187,183	0.50%
THL Bank Loan Select Fund	0.40% of Assets	$34,939,934	$139,760	0.40%
International Fixed Income		**$35,967,562**		
Franklin Templeton Emerging Market Bonds	0.99% of Assets	$35,967,562	$356,079	0.99%

Emerging Markets Equity
RFP Respondent Review

Background

- On February 23, 2018, Meketa Investment Group issued a $50 million Emerging Markets Equity RFP on behalf of the Retirement Association. Subsequently the search was posted to Meketa's website, sent to PERAC, and picked up by a variety of news sources.
- Meketa requested that all respondents submit the RFP by March 15, 2018
- The following pages are completed in accordance with PERAC regulations, and follow the revised search process provided in the new Chapter 176 regulations enacted at the end of 2011.
- Forty-nine managers submitted responses to this search.
- Based upon our review and evaluation of each respondent, Meketa Investment Group has ranked three managers as "Highly Advantageous," twenty-three ranked "Advantageous," and twenty-two ranked "Not Advantageous."
  - Two managers were rated as "Unacceptable," as they did not meet the minimum criteria for this search.
  - The ratings reflect Meketa Investment Group's opinions on each manager within the context of the Plymouth County Retirement Association's overall plan.

RFP Respondents

Manager	Headquarters	Strategy	Overall Rating
Driehaus Capital Management	Chicago, IL	Emerging Markets Growth	Highly Advantageous
GQG Partners	Fort Lauderdale, FL	Emerging Markets Equity	Highly Advantageous
LMCG	Boston, MA	Emerging Markets	Highly Advantageous
ABS Investment Management	Greenwich, CT	Emerging Markets Strategic Portfolio	Advantageous
Aberdeen Standard Investments	Edinburgh, U.K.	Emerging Markets Equity	Advantageous
Acadian Asset Management	Boston, MA	Emerging Markets Managed Volatility	Advantageous
AllianceBernstein	New York, NY	Emerging Markets Strategic Core Equity	Advantageous
American Century Investments	Kansas City, MO	Emerging Markets Equity	Advantageous
Artisan Partners	Milwaukee, WI	Developing World	Advantageous
Ashmore Investment Management	London, U.K.	EM Active Equity	Not Advantageous
Aubrey Capital Management	Edinburgh, U.K.	Global Emerging Markets	Unacceptable (insufficient AUM)
Axiom Investors	Greenwich, CT	Emerging Markets Equity	Advantageous
Baillie Gifford	Edinburgh, U.K.	Emerging Markets All Cap	Advantageous
BNY Mellon AMNA	Boston, MA	Emerging Markets Equity	Advantageous
Calamos Advisors	Naperville, IL	Emerging Economies Strategy	Not Advantageous
Columbia Threadneedle	Boston, MA	Emerging Markets Opportunity	Advantageous
Copper Rock Capital Partners	Boston, MA	Emerging Markets Small Cap	Advantageous
Dimensional Fund Advisors	Austin, TX	Emerging Markets Core Equity	Advantageous
Fiera Capital Management	New York, NY	Emerging Markets Core Growth	Advantageous
Fisher Asset Management	Camas, WA	Emerging Markets Equity	Not Advantageous
GAM Holding AG	Zurich, Switzerland	Emerging Markets Equity	Not Advantageous
Goldman Sachs Asset Management	New York, NY	Global Emerging Markets Equity	Not Advantageous
J O Hambro Capital Management	London, U.K.	Global Emerging Markets Opportunities	Advantageous
JP Morgan Asset Management	New York, NY	GEM Discovery	Advantageous
Lazard Asset Management	New York, NY	Emerging Markets Equity	Advantageous
LGM Investments	London, U.K.	Global Emerging Markets	Not Advantageous
Macquarie Investment Management	Philadelphia, PA	Emerging Markets Equity	Advantageous

RFP Respondents

Manager	Headquarters	Strategy	Overall Rating
Manulife Asset Management	Boston, MA	Emerging Markets Equity	Not Advantageous
Marathon Asset Management	London, U.K.	Emerging Markets	Not Advantageous
Martin Currie	Edinburgh, U.K.	Global Emerging Markets Equity	Not Advantageous
Mountain Pacific Group	Bellevue, WA	Emerging Markets Equity	Not Advantageous
Newton Investment Management	London, U.K.	Global Emerging Markets	Advantageous
Oaktree Capital Management	Los Angeles, CA	Emerging Markets Equity	Not Advantageous
Principal Global Investors	Des Moines, IA	Emerging Global Leaders	Not Advantageous
Putnam Investments	Boston, MA	Emerging Markets Equity	Not Advantageous
Quantitative Management Associates	Newark, NJ	Emerging Markets All Cap Equity	Not Advantageous
RBC Global Asset Management	Minneapolis, MN	Emerging Markets Equity	Advantageous
RVX Asset Management	Aventura, FL	Emerging Markets Equity	Unacceptable (insufficient AUM)
Schroder Investment Management	London, U.K.	Global Emerging Markets Core	Not Advantageous
State Street Global Advisors	Boston, MA	Emerging Markets Enhanced	Not Advantageous
TOBAM SAS	Paris, France	Anti-Benchmark Emerging Markets Equity	Not Advantageous
Trilogy Global Advisors	New York, NY	Emerging Markets Equity	Not Advantageous
Trilogy Global Advisors	New York, NY	Emerging Wealth Equity	Not Advantageous
UBS Asset Management	Zurich, Switzerland	Emerging Markets Equity HALO	Advantageous
Victory Capital	Brooklyn, OH	Sophus Emerging Markets	Advantageous
Wellington Management	Boston, MA	Emerging Markets Research Equity	Not Advantageous
Wells Fargo Capital Management	Boston, MA	Berkeley Street Emerging Markets Equity	Not Advantageous
Wells Fargo Capital Management	San Francisco, CA	SF Global Emerging Markets Equity Income	Not Advantageous
Westwood Global Investors	Boston, MA	Emerging Markets Smaller Companies	Advantageous
William Blair Investment Management	Chicago, IL	Emerging Markets Growth	Advantageous

Driehaus Capital Management

Rating Criteria	Rating	Rationale
Overall	Highly Advantageous	
Organization	Advantageous	• Driehaus Capital Management is a boutique investment management firm based in Chicago, IL. The firm was founded in 1982 by Richard Driehaus. The firm is 100% employee-owned; however, the majority of the stock is owned by Mr. Driehaus and his family trust. • The firm manages roughly $9 billion in assets across domestic, international equity products and alternative investment strategies. The Emerging Markets Growth product was incepted in January 1997 and has $3.3 billion in assets.
Team	Highly Advantageous	• The Driehaus Emerging Markets Growth Team is based in Chicago, IL and is led by portfolio manager Howard Schwab. Mr. Schwab has worked at Driehaus since 2001 and has been with the firm for his entire investment career. He became lead PM of the strategy in January 2008. • Mr. Schwab is supported by co-portfolio managers Chad Cleaver and Richard Thies. Messrs. Cleaver and Thies are involved in all phases of the research and portfolio construction process. The portfolio managers are supported by five dedicated equity research analysts, all of whom cover specific sectors. One dedicated emerging markets rates/credit/currency analyst is also part of the team.
Investment Philosophy	Advantageous	• Driehaus believes corporate earnings are the primary driver of stock prices over time, but that expectations of future earnings, relative valuation, and macroeconomic and behavioral factors also affect stock prices over the short- to medium-term. • Driehaus believes attractive returns are attainable by investing in fundamentally strong companies that experience positive earnings revisions and deliver superior earnings growth on a sustainable basis.
Investment Process	Highly Advantageous	• The investment process begins with a series of bottom-up screens used to isolate potentially attractive investments. Screens are focused on identifying positive change via a combination of sales, earnings improvements, as well as positive macroeconomic or technical developments. • From there, the team evaluates the business model and industry dynamics of attractive investment candidates. They seek to develop an investment thesis based on the pace and duration of growth and potential inefficiencies in expectations. • The portfolio typically holds 70-110 stocks. Portfolio turnover is relatively high, at 150-300% annually.
Performance	Highly Advantageous	• Inception Date: 1/1997. Driehaus has produced strong and consistent excess returns over all trailing periods. The strategy has outperformed the index by 7.5%, 2.4%, 2.2%, 2.5%, and 6.2% over the trailing one-, three-, five-, and ten-year and since inception periods, net of fees.
Fees	Highly Advantageous	• Collective Investment Trust: Effective fee of 0.65% on all assets. Ranks in first quartile of respondents.

GQG Partners

Rating Criteria	Rating	Rationale
Overall	Highly Advantageous	
Organization	Advantageous	• GQG Partners is a boutique asset management firm based in Fort Lauderdale. The firm manages concentrated, benchmark-agnostic global equity portfolios. GQG was founded by Rajiv Jain, former CIO and Co-CEO of Vontobel Asset Management. The firm is 95% employee-owned. The remaining 5% of the stock is held by Pacific Current Group. • The firm manages \$13B in assets across three products: Global Equity, International Equity, and Emerging Markets Equity. The Emerging Market Equity strategy has \$5.4B billion in AUM.
Team	Highly Advantageous	• The GQG investment team is led by Chairman and CIO Rajiv Jain. Mr. Jain makes all final decisions on the Emerging Markets equity strategy. He has twenty-seven years of investment experience. Prior to founding GQG Partners, Mr. Jain served as lead portfolio manager on the Emerging Markets strategy from 1997 to 2016, and was the lead portfolio manager on the Global and International Equity strategies from 2002 to 2016. • Mr. Jain is supported by nine analysts and two traders.
Investment Philosophy	Advantageous	• GQG Partners believes that long-term, stable, and superior earnings growth drives investment returns and risk-adjusted outperformance. The team seeks to invest in businesses that are predictable, sustainable, and trade at an attractive margin of safety (at least a 25% discount to the analyst's assessment of intrinsic value). Mr. Jain believes in building concentrated portfolios of high conviction positions with little attention paid to the benchmark.
Investment Process	Highly Advantageous	• The GQG investment process begins with a series of quantitative screens focused on profitability and stability. The team's favored metrics include low amounts of leverage, high ROE/ROA, high free cash flow, and stable earnings. • GQG believes that quality companies should have a defensible franchise, a consistent and durable business, strong pricing power, low capital intensity, and transparent accounting. If a company meets these quality criteria, the focus then shifts to valuation. If a company's stock is trading at a significant discount (>25%) to a conservative estimate of its long-term value, it is a candidate for purchase. • GQG manages a relatively concentrated portfolio of approximately 50-80 positions. Annual portfolio turnover is typically between 30% and 70%.
Performance	Highly Advantageous	• Inception Date: 1/1997[1]. GQG has outperformed the index over all trailing periods, in particular, the strategy's long-term results are compelling. The strategy has outperformed the index by 2.2%, 1.8%, 1.3%, 4.1%, and 3.5% over the trailing one-, three-, five-, and ten-year and since inception periods, net of fees.
Fees	Highly Advantageous	• Collective Investment Trust: Effective fee of 0.73% on all assets. Ranks in first quartile of respondents.

[1] Performance prior to June 2016 is from the Vontobel Emerging Markets strategy. Rajiv Jain managed the Vontobel Emerging Markets strategy from January 1997 to May 2016.

LMCG

Rating Criteria	Rating	Rationale
Overall	Highly Advantageous	
Organization	Advantageous	• LMCG is a boutique equity investment management firm headquartered in Boston, MA. The firm was founded in 2000 by Lee Munder and is owned by the Royal Bank of Canada (61%), Mr. Munder (21%), and LMCG employees (18%). • LMCG Investments manages approximately $7.8B in AUM. The Emerging Markets Equity product has $1.5B in AUM.
Team	Advantageous	• Lead portfolio manager Gordon Johnson has managed the strategy since inception and has twenty-four years of investment experience. Mr. Johnson's co-portfolio manager on the strategy, Shannon Ericson, has also worked on the team since the strategy's inception in 2006. They are supported by two junior analysts.
Investment Philosophy	Advantageous	• The investment team believes that a bottom-up, quantitative investment approach can add value over time. • The team aims to capitalize on market anomalies using a dynamic process incorporating a variety of market factors and risk tools.
Investment Process	Advantageous	• The team begins with a screen of the investment universe that is focused on value, market dynamics, and quality factors. Value includes peer-relative rankings of price multiples and dividend yield, quality includes an assessment of earnings quality and return on capital, and market dynamics factors include earnings growth prospects and relative strength (technical analysis). • Stocks ranking in the top quintile of this combined "Alpha" score are available for purchase in the portfolio. The team runs an optimizer to assess each stock's contribution to risk and portfolio profile. • The strategy focuses on the top-quintile of alpha scores and constructs a well-diversified portfolio of 90-125 stocks utilizing a proprietary risk model and benchmark relative country, sector, and stock active risk constraints.
Performance	Advantageous	• Inception Date: 1/2008. LMCG's returns have been weak over the short- and medium-term; however the results are better over longer-term periods due to strong performance in the first five calendar years of the track record. LMCG has underperformed the index by -0.4%, -2.3%, and -1.8% over the trailing one-, three-, and five-year, but has outperformed by 1.3% and 1.4% over ten years and since inception.
Fees	Highly Advantageous	• Collective Investment Trust: Effective fee of 0.75% on all assets. Ranks in first quartile of respondents.

- As of May 31, the Association had $98.5 million invested in the LMCG Emerging Markets Equity strategy.

ABS Investment Management

Rating Criteria	Rating	Rationale
Overall	Advantageous	
Organization	Advantageous	• ABS Investment Management is based in Greenwich, CT. The firm is majority employee-owned. Employees own 58% of the stock and Evercore Inc. (NYSE: EVR), a publicly traded investment banking firm, owns the remaining 42%. ABS is a fund of funds manager that specializes in long/short equity strategies. • The firm's flagship EM strategy is a long-short fund of hedge funds portfolio. This product has roughly $460m in AUM. In November 2017, a long-only carve-out of the flagship EM product was funded. The long-only version has $106m in AUM.
Team	Advantageous	• The ABS Emerging Markets Strategic Portfolio is managed by three PMs: Alain de Coster, Laurence Russian, and Guilherme Valle. The PMs have over twenty years of investment experience. • Additionally, four research analysts support the Emerging Markets Strategic Portfolio. They operate as generalists.
Investment Philosophy	Advantageous	• ABS believes that a portfolio of smaller, focused, local investment specialists can deliver superior risk-adjusted returns over time.
Investment Process	Advantageous	• ABS seeks to discover talented, local EM investment specialists. The investment team performs deep and thorough manager due diligence on fund managers. They seek to understanding the repeatability and durability of a manager's process, and whether or not they possess an investment edge within their local markets. • While each underlying investment strategy (roughly eight to twelve managers) carries a significant amount of active risk (high tracking error), total portfolio risk is controlled by using multi-managers who execute their strategies in various countries/regions and may execute different investment approaches. • The end portfolio is diversified across regions, mandate types, and investment styles. The portfolio targets a beta of 1. Country/sector exposures are roughly benchmark-neutral. The portfolio has an all-cap tilt. The strategy's value-added is therefore dependent on ABS's top-down manager selection, manager weightings, the underlying manager's stock selection/slugging percentage, and small cap factors.
Performance	Advantageous	• Inception Date: 11/2017. The Emerging Markets Strategic Portfolio returns are simulated returns prior to November 2017. The live track record is too short to draw inferences based on performance analysis at this stage. However, the simulated performance (prior to 11/2017) and the live performance of the long-only carve out of firm's flagship EM long/short strategy has performed well. ABS has outperformed the index by 4.6%, 3.1%, and 4.8% over the trailing three-year, five-year, and since inception periods.
Fees	Advantageous	• Commingled Fund: Effective fee of 0.80% on all assets. Ranks in the second quartile of respondents.

Aberdeen Standard Investments

Rating Criteria	Rating	Rationale
Overall	Advantageous	
Organization	Advantageous	• Aberdeen Standard Investments is a large, publically traded global asset management firm based in Aberdeen, Scotland. The firm was originally founded in 1983 via a management buyout by Aberdeen's CEO, Martin Gilbert. In 2017, Aberdeen merged with Standard Life, which resulted in the formation of Aberdeen Standard Investments (LSE: SLA). • The firm manages $370B in AUM across a range of equity, fixed income, and real estate strategies. The Emerging Markets strategy has $40B in AUM, down from a peak of $59B in March 2013.
Team	Advantageous	• Aberdeen's Global Emerging Markets team consists of fifty investment professionals, located in Aberdeen's offices around the world. The investment team is led by Head of Equities, Devan Kaloo.
Investment Philosophy	Advantageous	• Aberdeen believes sound fundamentals drive stock prices and superior long-term returns are achieved by identifying high quality stocks at attractive valuations and holding them for the long-term. • The team believes absolute risk, as opposed to benchmark relative risk, is paramount. As such, they believe in constructing diversified portfolios independent of the benchmark.
Investment Process	Advantageous	• Fundamental, bottom-up research is the cornerstone of Aberdeen's investment process. The first step in the research process is an assessment of quality. Analysts review company financials, transparency, and are heavily reliant on company visits and meetings with management. • If a company fits Aberdeen's quality criteria, analysts will consider valuation and determine whether the stock is expensive or cheap based on a variety of valuation techniques. Stocks that are both high quality and attractively valued are then considered for inclusion in the portfolio. • The end result is a broadly diversified portfolio of 30-70 stocks with historically low portfolio turnover.
Performance	Advantageous	• Inception Date: 1/1996. Aberdeen has a long track record in the EM space. While the strategy's long-term performance is compelling, Aberdeen has been below expectations over the short- to medium-term. The strategy has underperformed the index over the trailing one, three-, and five-year periods by -9.7%, -2.2%, and -2.4%, net of fees, respectively. However, over the 10-year and since inception periods, Aberdeen has strongly outperformed the index with excess returns of 3.2%.
Fees	Not Advantageous	• Commingled Fund: Effective fee of 0.95% on all assets. Ranks in third quartile of respondents.

Acadian Asset Management

Rating Criteria	Rating	Rationale
Overall	Advantageous	
Organization	Advantageous	• Acadian Asset Management is based in Boston and is a wholly-owned subsidiary of BrightSphere Investment Group (NYSE: BSIG), a publicly-traded company that was formerly known as Old Mutual Asset Management (NYSE: OMAM). • Acadian manages approximately $99 billion in asset across predominantly quantitative equity strategies. The Emerging Markets Managed Volatility Equity strategy was incepted in 2011 and has $2.6 billion in assets.
Team	Advantageous	• Acadian has a deep team of nineteen portfolio managers and twenty-two analysts. • While the investment team is deep and has many Ph.D.'s, investment team turnover has been an issue more recently.
Investment Philosophy	Advantageous	• Acadian believes that markets are inefficient, and that such inefficiencies are caused in part by behavioral anomalies. • Quantitative models can help remove human biases and exploit these market inefficiencies.
Investment Process	Advantageous	• Acadian uses a fully quantitative investment process. The EM Managed Volatility strategy is designed to have lower than market volatility. • Acadian first defines a low volatility universe of stocks. From there, Acadian's models score each stock on a bottom-up and top-down (region/industry relative) basis. The portfolio is then optimized using Axioma to minimize unintended bets. . • The end result is a diversified portfolio of stocks with modest active risk.
Performance	Not Advantageous	• Inception Date: 3/2011: Acadian has outperformed the index since inception by 3.0%. However, the strategy has underperformed the index over the trailing one-, three-, and five-year period by 6.7%, -3.5%, and -0.4%, net of fees.
Fees	Advantageous	• Commingled Fund: Effective fee of 0.80% on all assets. Ranks in the second quartile of respondents.

AllianceBernstein

Rating Criteria	Rating	Rationale
Overall	Advantageous	
Organization	Advantageous	• AllianceBernstein (NYSE: AB) is a large, publicly-traded global asset manager based in New York, NY. The firm is 64% owned by AXA Financial (EPA: CS), a large, publicly-traded insurance company based in Paris, France. AB employees own roughly 13% of the firm and the public owns the remaining balance of the stock. • AB manages $549 billion in assets across a range of asset classes and investment products. The Emerging Markets Strategic Core strategy has $1.8B in AUM.
Team	Advantageous	• The product is managed by AB's Strategic Core Equities team, which consists of three investors. Kent Hargis and Sammy Suzuki are co-CIOs of the Strategy Core team. They are supported by Stuart Rae, who is the CIO of Asia-Pac Value Equities. Previously, Mr. Suzuki was a PM on the AB Emerging Markets Value product. • AB utilized a centralized analyst pool. Analysts conduct fundamental research and support the various AB investment teams, including the Strategy Core Equities team.
Investment Philosophy	Advantageous	• The Strategic Core investment philosophy is based on the belief that downside protection drives long-term outperformance. Absolute risk, as opposed to benchmark-relative risk, is an important facet of successful investing. Additionally, fundamental research based on the sustainability of cash-flows can unearth exploitable investment opportunities.
Investment Process	Advantageous	• AB uses a quantitative screening process to find new investment ideas. Their quantitative model scores and ranks companies based on cash-flow sustainability, stability of growth, risk (i.e. volatility and beta), and relative valuation. The PMs will then review the output to identify companies for further research. • From there, the analysts will conduct fundamental research on each stock. Their analysis focuses on the key drivers of earnings and cash-flows for a company. Additionally, analysts will make a qualitative assessment of company management. • The portfolio managers use a variety of risk modules (e.g. Barra) to construct the end portfolio. They stress test the portfolio at the company, sector, regional, and investment style level to ensure the portfolio does not carry any unintended bets. The end result is a portfolio of 80 to 90 stocks. The portfolio will own some developed market listed stocks that have a portion of their growth in emerging markets economies, but these stocks make up a small percentage of the portfolio.
Performance	Advantageous	• Inception Date: 7/2012: AB has outperformed the index since inception by 2.9%. The strategy has underperformed over the trailing one-year period by -6.3%, but has outperformed over three- and five-years by 0.5% and 2.9%, net of fees.
Fees	Not Advantageous	• Commingled Fund: Effective fee of 0.95% on all assets. Ranks in the third quartile of respondents.

American Century Investments

Rating Criteria	Rating	Rationale
Overall	Advantageous	
Organization	Advantageous	• American Century Investments (ACI) is an independent investment management firm based in Kansas City, MO. The company was founded by James Stower in 1958. The firm is owned by the Stowers Institute, who owns 44% of the stock and holds the majority voting rights, Nomura Holdings (40%), and current employees (16%). • The firm manages roughly $165 billion in assets and offers a variety of products in various asset classes. The Global Growth strategy was incepted in July 2010 and has $11 billion in assets.
Team	Advantageous	• The strategy is led by two portfolio managers, Patricia Ribeiro and Anthony Han, who, in turn, are supported by three dedicated analysts.
Investment Philosophy	Advantageous	• American Century focuses on the second derivative of growth (i.e. the rate of change). • The team believes that accelerating growth in earnings and revenues is more highly correlated to stock price performance rather than the absolute level of growth.
Investment Process	Advantageous	• ACI employs a bottom-up security selection process that begins by identifying companies with sufficient liquidity exhibiting accelerating growth and improving fundamentals. Ideas flow in through many channels including screens, news sources, and industry contacts. • Analyst recommendations are predicated on evidence that a company is at the early stage of a growth cycle, likely will have sustainable growth, has an observable and exploitable gap in consensus earnings expectations, and is priced at a favorable valuation. • The strategy limits position size to less than a 3.0% active weight, with sector exposures limited to +/-10% versus the benchmark. The strategy holds around 80-110 stocks.
Performance	Advantageous	• Inception Date: 11/1997: ACI has produced strong excess returns over the short- and medium-term, but long-term excess returns, while positive, are somewhat weaker. The strategy has outperformed over the trailing one-, three-, five-, and ten-year and since inception periods by 9.1%, 3.9%, 3.5%, 0.8%, and 1.6%, respectively, net of fees.
Fees	Advantageous	• Collective Investment Trust: Effective fee of 0.90% on all assets. Ranks in the second quartile of respondents.

Artisan Partners

Rating Criteria	Rating	Rationale
Overall	Advantageous	
Organization	Advantageous	• Artisan Partners (NYSE: APAM) is a large, multi-boutique investment management firm based in Milwaukee, WI. The firm consists of eight investment teams that operate autonomously as investment boutiques. As of March 2017, Artisan Partners had $115B in AUM. • The Developing World Team is based in San Francisco, CA. The Team manages a single investment product, Artisan Developing World, which has $2.5B in AUM.
Team	Advantageous	• Lead Portfolio Manager, Lewis Kaufman has run the strategy since its inception. Before joining Artisan, Mr. Kaufman developed and managed the Thornburg Developing World strategy using the same philosophy and process. • Mr. Kaufman is supported by two dedicated research analysts. While Mr. Kaufman is a strong, seasoned emerging markets investor, his two most senior analysts, which previously worked at Thornburg as well, left the firm in June 2017.
Investment Philosophy	Highly Advantageous	• The Artisan Developing World investment team believes that earnings growth and compounding business value drives long-term appreciation. They believe that companies with these qualities are less likely to impair capital during periods of extreme market volatility characteristic of emerging markets investing. Additionally, Artisan believes that dynamically managing the portfolios currency exposures can mitigate certain political and economic risks unique to emerging markets.
Investment Process	Highly Advantageous	• Artisan takes a traditional, fundamental, research-intensive approach to stock selection, while also appreciating that macroeconomic factors are critical when investing in emerging markets. The bottom-up research process begins with investment screens on valuation (P/everything) and quality metrics (ROE, ROA, ROIC, etc.) They favor companies that are financially sound and have low leverage. • The team also seeks to mute the portfolio's absolute volatility by actively managing currency risk. This top-down component of the process focuses on economic drivers such as current account balances. As a diversification and risk mitigation tool, the team will also invest in developed market-listed companies with significant revenues/earnings growth derived from emerging markets. • The end result is a concentrated, benchmark-agnostic portfolio of 40 to 70 holdings. Annual portfolio turnover typically averages 30-50%.
Performance	Advantageous	• Inception Date: 1/2010[1]: Artisan has underperformed the index over the trailing one-year period by -3.6%, but has modestly outperformed over the trailing three- and five-year by 1.4% and 1.6%, net of fees. Since inception, the strategy has outperformed by 4.6%.
Fees	Not Advantageous	• Collective Investment Trust: Effective fee of 1.05% on all assets. Ranks in the fourth quartile of respondents.

[1] Artisan's performance includes the performance for the Thornburg Developing World strategy, which was founded and managed by Lewis Kaufman from January 2010 to February 2015. MSCI Emerging Markets Index returns are used as a return proxy during the interim period from March 2015 through June 2015 when Mr. Kaufman was transitioning to Artisan Partners.

Ashmore Investment Management

Rating Criteria	Rating	Rationale
Overall	Not Advantageous	
Organization	Advantageous	• Ashmore Group plc (LSE: ASHM) is a large, publicly traded asset management firm based in London, England. The firm originally started as a branch of the Australian and New Zealand Banking Group. However, the company spun-out via a management buyout in 1999. In 2006, the firm listed its shares on the London Stock Exchange. • The firm manages $77B in AUM across fixed income, multi-asset, and equity products. The firm is well-known for its fixed income business, which accounts for the majority of Ashmore's AUM. The EM Active Strategy is an adaptation of the firm's flagship EM Equity product, Emerging Markets Equity. Emerging Markets Equity has a long track record, however, performance has been relatively weak. The EM Active product has $444m in AUM.
Team	Advantageous	• The lead PM on the product is Fernando Assad. Mr. Assad joined the firm in 2007 and has managed the portfolio since its inception. • Mr. Assad is supported by the broader Ashmore Investment resources, which includes around eighty-one investment professionals.
Investment Philosophy	Advantageous	• Ashmore believes alpha can be captured through several sources. Emerging markets represent a diverse group of economies, which varying structural and cyclical growth, political, and regulatory backdrops. As such, the combination of top-down and bottom-up decision making can be value-additive in emerging markets.
Investment Process	Advantageous	• Top-down analysis forms the starting point of the investment process. Ashmore's investment professionals form top-down views through political, macroeconomic, flow of funds, currency, and equity analysis. Additionally, the team will formulate industry investment views as well, given that certain industries are impacted more by cross-border top-down factors than others. • Bottom-up analysis starts by screening the universe of stocks for adequate liquidity. From there, analysts identify stocks with good relative valuations and improving fundamentals. Analysts will be a financial model for attractive companies and set twelve month price targets. Ashmore analysts typically use a Gordon Growth Model (i.e. DDM) valuation methodology within their valuation approach. • Portfolios are concentrated and generally hold 30 to 40 stocks.
Performance	Not Advantageous	• Inception Date: 10/2011: Ashmore has produced strong excess returns over all trailing periods. The strategy has outperformed by 7.0%, 6.6%. However, performance prior to February 2016 is a carve-out simulative from a different Ashmore EM equity product; therefore, the track record for the 4.3 years prior to February 2016 should be discounted.
Fees	Not Advantageous	• Mutual Fund: Effective fee of 1.02% on all assets. Ranks in the fourth quartile of respondents.

Axiom Investors

Rating Criteria	Rating	Rationale
Overall	Advantageous	
Organization	Highly Advantageous	• Axiom International Investors was founded in 1998 and is a 100% employee-owned asset management firm based in Greenwich, CT. • The firm manages $12.2 billion across long-only and long/short equity strategies, with roughly $6.4 billion in the Emerging Markets Equity strategy.
Team	Advantageous	• The strategy is led by Christopher Lively, Lead Portfolio Manager. Mr. Lively joined Axiom in 2008 having previously worked at Clay Finlay as a PM. Mr. Lively is supported by co-Portfolio managers, Donald Elefson and Jose Gerado Morales. Mr. Elefson joined the firm in 2012 and Mr. Morales joined in 2017. • The Axiom PMs are supported by nine research analysts.
Investment Philosophy	Advantageous	• Axiom believes the single most important determinant of a company's relative share price performance is whether the company is able to demonstrate better than anticipated progress results in its key business drivers, with valuation being merely a supplemental consideration.
Investment Process	Advantageous	• The investment process begins with a review of the market to identify companies with positive, above-expectations operating results. If a company starts to look "interesting", the team attempts to break the business down into 12-15 key operating drivers. After isolating these key drivers, they survey company competitors, suppliers, sell-side analysts, and other third parties to quantify market expectations for these key drivers. • The team then tracks the operating performance of each company relative to market expectations over time to identify those companies that are tracking ahead of expectations. The team also utilizes a proprietary database to track company rankings. Compelling stocks are presented to the team with a summary stock model and a ratings worksheet. • Portfolios typically hold around 80-100 stocks.
Performance	Advantageous	• Inception Date: 8/2007: Axiom's excess returns have been strong over the trailing one- and ten-year and since inception periods, but have been weaker over the medium-term. The strategy has underperformed, net of fees, over the trailing three-year period by -0.4%. Over the trailing one-, five-, and ten-year and since inception periods, excess returns have been 4.6%, 0.8%, 2.3%, and 2.5%.
Fees	Not Advantageous	• Collective Investment Trust: Effective fee of 1.07% on all assets. Ranks in the fourth quartile of respondents.

Baillie Gifford

Rating Criteria	Rating	Rationale
Overall	Advantageous	
Organization	Advantageous	• Baillie Gifford is a large asset management company based in Edinburgh, Scotland. The firm was founded in 1908 and is 100% employee-owned. Baillie Gifford's sole business is asset management. • The firm manages $249 billion in assets across a range of equity, fixed income, and multi-asset products. The Emerging Markets All Cap strategy was incepted in 1994 and has roughly $7.4B in AUM.
Team	Advantageous	• The investment team is led by the Head of Emerging Markets Equities, Richard Sneller. Mr. Sneller has worked at Baillie Gifford since 1994 and has been an emerging markets investment team member since 1997. • The strategy is supported by six co-PMs and two research analysts. Baillie Gifford utilizes an analyst rotation program, whereby junior analysts rotate amongst the various investment teams. Therefore, it is common for turnover to occur at the analyst ranks.
Investment Philosophy	Advantageous	• Baillie Gifford believes that markets tend to under-appreciate the ability for companies to achieve exponential growth and compound returns. • To exploit the market's misperception, Baillie Gifford believes in building high conviction portfolios of rapidly growing business, and holding them over the long-term, can potentially deliver outstanding perform over the long-term.
Investment Process	Advantageous	• Baillie Gifford uses a fundamental, bottom-up investment process. The team looks for growth companies that continue to have a long runway for exponential growth. Idea generation ad-hoc, as Baillie Gifford does not rely on traditional investment screens. • The team's research framework combines extensive quantitative and qualitative analysis on company's they believe had tremendous growth potential. The team seeks to answer 10 core questions with regards to investment candidates that assess a company's market potential and competitive advantages, culture, customer base, management vision, and potential returns, among other factors. • The end result is a diversified portfolio. While the portfolio will hold between 60-75 names, the portfolio's top ten positions generally account for more than 45% of the portfolio.
Performance	Highly Advantageous	• Inception Date: 10/1994: Baillie Gifford's returns have been strong over the trailing one-, three-, five-, and since inception periods, with excess returns of 8.0%, 3.4%, 3.9%, and 3.8%, respectively. While positive over the ten-year period, excess returns have been more modest, net of fees, with outperformance of 1.6%.
Fees	Advantageous	• Mutual Fund: Effective fee of 0.87% on all assets. Ranks in the second quartile of respondents.

BNY Mellon AMNA

Rating Criteria	Rating	Rationale
Overall	Advantageous	
Organization	Advantageous	• BNY Mellon AMNA is an asset management subsidiary of BNY Mellon (NYSE: BK), a publically traded financial services company. The team that manages the Emerging Markets Equity product was formerly a part of The Boston Company, which was a subsidiary of BNY Mellon. In 2017, BNY Mellon merged Mellon Capital Management, Standish Mellon, and The Boston Company to create BNY Mellon AMNA • The firm manages $559B in AUM across a mix of equity, fixed income, and alternative strategies, with approximately $945m in the Emerging Markets Equity product.
Team	Advantageous	• The Emerging Markets Equity strategy is managed by the Global Core Team. This team manages products across the global equity spectrum. The portfolio managers on the strategy are Sean Fitzgibbon and Jay Malikowski. They are supported by twelve analysts.
Investment Philosophy	Advantageous	• The BNY Mellon team believes the most consistent factors leading to outperformance are improving business momentum, attractive valuation, and acceptable quality. • As such, they believe a focus on earnings, fundamental bottom-up research, and risk-awareness will provide superior risk-adjusted returns independent of the market environment.
Investment Process	Advantageous	• The team starts by screening the universe by minimum investment criteria (i.e. liquidity, analyst coverage, and positive book value). • From there, the team ranks the universe of stocks on relative attractiveness using a combination of quantitative models and analyst judgment. The quantitative model provides a score, while analysts provide a buy, sell, or hold recommendation. • The portfolio managers review each trade recommendation with the sector analyst and have final authority on all inclusions in the portfolio. The strategy is benchmark-aware and holds between 80-100 stocks.
Performance	Advantageous	• Inception Date: 8/2005: The product has outperformed over the trailing one-year period by 5.3%. However, excess returns have been relatively weak over the longer-term. The strategy has modestly outperformed over the trailing three-, five-, and ten-year and since inception periods by 2.0%, 0.4%, 0.5%, and 1.2%, net of fees, respectively.
Fees	Highly Advantageous	• Commingled Fund: Effective fee of 0.66% on all assets. Ranks in the first quartile of respondents.

Calamos Advisors

Rating Criteria	Rating	Rationale
Overall	Not Advantageous	
Organization	Advantageous	• Calamos Advisors is based in Naperville, IL and was founded in 1977. The firm went public in in 2004 at $18/share, but in February 2017 the firm's founder, John Calamos, and Calamos CEO, John Koudounis, took the firm private at $8.25. • Calamos manages $22B in AUM across equity, fixed income, and alternatives investment products. The Emerging Economies Strategy has $421m in AUM.
Team	Not Advantageous	• Three PMs contribute to the Emerging Economies product: John Calamos (Founder/Global CIO), Nick Niziolek (Co-CIO/Head of International and Global Strategies), and Dennis Cogan (co-PM). • The group listed above leverages a group of centralized research analysts for investment support, who also support other Calamos products.
Investment Philosophy	Advantageous	• Calamos believes that innovation and entrepreneurship are drivers of successful growth companies. They believe that using a top-down and bottom-up framework allows for a repeatable process over the long-term. Additionally, they believe that market cap-weighted benchmarks are inefficient and portfolios with high active share and good risk management can outperform over time.
Investment Process	Advantageous	• The investment process starts with an assessment of the macroeconomic backdrop. The firm's top-down views provide a road-map for bottom-up stock selection. • Analysts then screen for companies within top-down themes to focus their research efforts. Screen are growth-focused and uses factors such as earnings surprises, price momentum, earnings momentum, and other technical criteria to identify attractive stocks. Attractive candidates will be research further by analysts, who look to verify the fundamental story for a given stock. • Portfolios hold 80 to 100 stocks. Position sizes are limited to a maximum active weight of 5%.
Performance	Not Advantageous	• Inception Date: 12/2008: Calamos has underperformed the index since inception by -0.4%. Additionally, the strategy has underperformed the index over the trailing three-year period and has marginally covered its fees over the trailing five-year with excess returns of 0.4%.
Fees	Highly Advantageous	• Commingled Fund: Effective fee of 0.53% on all assets. Ranks in the first quartile of respondents.

Columbia Threadneedle

Rating Criteria	Rating	Rationale
Overall	Advantageous	
Organization	Advantageous	• Columbia Management is a Boston-based asset management firm and is a wholly-owned subsidiary of Ameriprise Financial (NYSE: AMP). Ameriprise Financial is a publically-traded financial services firm. • Columbia manages roughly $357 billion in AUM across an array of equity, fixed income, balanced, and alternative strategies, with approximately $3.7 billion in the Emerging Markets Opportunity product.
Team	Advantageous	• The product is managed by lead PM Dara White. Mr. White is based in the firm's Portland, OR office and has been the lead PM on the strategy since its inception in 2011. • Mr. White is supported by four investors who operate as co-PMs and analysts.
Investment Philosophy	Advantageous	• The Emerging Markets Opportunity strategy is an adaptation of the team's flagship Emerging Markets product. Both execute on a similar philosophy and process, however, Emerging Markets Opportunity is more concentrated and has higher tracking error. • Columbia believes that a combination of quantitative and fundamental analysis is superior to using either in isolation. They also believe that top-down analysis is equally critical to the bottom-up in emerging markets. Over the long-term, they believe stock prices ultimately follow sustainable and accelerating earnings growth. Lastly, they believe that a broadly diversified portfolio that is less-concentrated should not sacrifice returns, as diversification serves to mitigate portfolio risk.
Investment Process	Advantageous	• Columbia's investment process begins the use of a proprietary, multi-factor quant model. The model scores the universe of stocks based on a variety of factors, including quality, growth, momentum/sentiment, and relative valuations. • From there, highly rank stocks will be subjected to additional research by the team. Team members are organized by sectors and perform research on companies within their assigned areas. Uniquely, price targets are set for active weights, whether owned or not owned, in excess of 25bps. In this way, the team is forced to know the reasoning for owning or not owning a stock. • Portfolios are diversified across roughly 100 stocks.
Performance	Highly Advantageous	• Inception Date: 7/2011: Columbia has delivered strong performance since the product's inception, though the track record remains relatively short when compared to other strongly performing respondents. The strategy has outperformed the index, net of fees, by 8.3%, 4.4%, 3.2%, and 3.9% over the trailing one-, three-, and five-year and since inception periods, respectively.
Fees	Highly Advantageous	• Collective Investment Trust: Effective fee of 0.71% on all assets. Ranks in the first quartile of respondents.

Copper Rock Capital Partners

Rating Criteria	Rating	Rationale
Overall	Advantageous	
Organization	Advantageous	• Copper Rock Capital Partners LLC, was established in 2005 as a global small cap equity investment management firm. Copper Rock is an affiliate of BrightSphere Investment Group (NYSE: BSIG) (formerly known as Old Mutual Asset Management), which owns a 65% stake in the business. • Copper Rock manages four global and international small cap investment strategies and a total of $6B in AUM. Emerging Markets Small Cap product has $603m in AUM.
Team	Advantageous	• The analyst team includes five portfolio managers and four analysts. The lead PM of the Emerging Markets Small Cap strategy is David Shea, who has been with Copper Rock since its inception. • He is supported by Stephen Dexter, Copper Rock's CIO, three additional portfolio managers, Tim Codrington, Denise Selden, and David Dineen, and the four equity analysts. This team supports the various other products as well, however, with respect to the EM Small Cap strategy, David Shea is the final decision-maker.
Investment Philosophy	Advantageous	• The team believes that a blend of quantitative and fundamental research aimed at identifying companies with superior growth rates relative to peers will lead to consistent outperformance. The team seeks out resilient, defensive businesses characterized by long-term market share gains, high profitability, and significant internal cash generation.
Investment Process	Advantageous	• The team begins with a screen of the investable universe. The team's multi-factor model assesses companies on valuation, earnings revision, and growth sustainability/quality. The team often includes stocks that screen poorly in the research process if they believe that the stock is poised to deliver growth in excess of consensus expectations. • The team integrates fundamental research into the process with detailed fundamental company analysis and meetings with management. The team seeks to distill future growth prospects, understand the dynamics of valuation relative to peers and history, and measure incremental returns on invested capital. Purchase decisions are made at the discretion of PM David Shea. • The portfolio generally holds 80-100 stocks with turnover of 75-100% per year.
Performance	Advantageous	• Inception Date: 10/2012: Copper Rock has outperformed the MSCI EM Small Cap index since inception by 2.5%, net of fees. Returns have been relatively strong over the short- to medium-term; however, the track record is somewhat short, with the first 4 years produced on an asset base of less than $100m.
Fees	Not Advantageous	• Commingled Fund: Estimated effective fee of 1.00% on all assets. Ranks in the third quartile of respondents.

Dimensional Fund Advisors

Rating Criteria	Rating	Rationale
Overall	Advantageous	
Organization	Advantageous	• Dimensional Fund Advisors (DFA) is a privately owned investment management firm, with ownership shared between current and former employees and a select group of outside investors. • DFA has offices globally and manages $586B AUM across a variety of equity and fixed income strategies. The Emerging Markets All Cap Core product has $34B in AUM.
Team	Advantageous	• The team is made up of eleven members of the investment committee, including three portfolio managers. DFA investment professionals are focused on academic research and implementation, as opposed to traditional stock research. • The Emerging Markets All Cap Value strategy is managed by the International Equity Portfolio Management team. Portfolio managers are located across their global offices.
Investment Philosophy	Advantageous	• DFA believes that equity investing should involve a long-term view and a systematic focus on sources of expected return, rather than stock picking or market timing. DFA's philosophy is rooted in academic research. The strategy is based on three core principles: 1) financial markets are largely efficient, 2) higher returns are the reward for bearing greater risk, and 3) three systematic risk factors largely explain returns in equity markets.
Investment Process	Advantageous	• DFA employs a systematic, process-driven approach to portfolio construction and begins with a series of screens to define an investable universe of stocks by applying certain minimum criteria. • Once defined, DFA filters the universe using market capitalization and country minimum constraints. Stock selection decisions are predominantly based on the combination of market capitalization, price-to-book ratios, and profitability. A price momentum overlay is also incorporated in the process. • The end result is a diversified portfolio of 2,000+ stocks with relatively low active risk.
Performance	Not Advantageous	• Inception Date: 5/2005. DFA's returns have been relatively weak over all trailing periods. The strategy has marginally outperformed the index over the trailing three-, five-, and since inception periods, with excess returns of 0.4%, 0.3%, and 0.6%, net of fees. In part, these results are due to the market environment, which has favored growth stocks over value stocks for the last ten years.
Fees	Highly Advantageous	• Mutual Fund: Estimated effective fee of 0.57% on all assets. Ranks in first quartile of respondents.

Fiera Capital Management

Rating Criteria	Rating	Rationale
Overall	Advantageous	
Organization	Advantageous	• Fiera Capital is a large investment management firm based in Montreal, Quebec. The firm is publicly traded (TSE: FSZ) and offers a suite of products across fixed income, global equities, and alternative asset classes. • Fiera manages approximately $102 billion in assets. The Global Emerging Markets Core Growth strategy has $431m in AUM.
Team	Advantageous	• The product is managed by the former Charlemagne Capital investment team. In December 2016, Charlemagne was acquired by Fiera Capital. In 2017, the firm was rebranded as Fiera Europe. • The investment team consists of two PMs and eight analysts. Mark Bickford-Smith serves as lead PM of the product.
Investment Philosophy	Advantageous	• Fiera believes sustainable, risk-adjusted returns can be achieved by building a concentrated portfolio of high quality, growth companies. They believe companies that are well-managed, benefit from multi-year growth trends, and have reasonable valuations can outperform over a full market cycle.
Investment Process	Advantageous	• The investment process is entirely bottom-up. The investment team screens the universe for stocks that exceed their quality threshold. Companies must be well-managed (i.e. stable and increasing ROIC), have strong business models, possess competitive moats, and be in sound financial condition. • Companies that exhibit these characteristics make it onto a "radar screen." From there, Fiera performs continuous research on this list of stock to further their understanding of the business. The team will visit with company management as part of their research process. Valuation analysis is performed at this stage. Various methodologies are used to value companies (e.g. relative value and intrinsic value). Attractive investment candidates are given a twelve-month price target and can be purchased into portfolios. • Portfolios are growth-oriented, benchmark-agnostic, and generally holds 50 stocks.
Performance	Advantageous	• Inception Date: 2/2012. Fiera has produced modest excess returns, net of fees, over all trailing periods. The strategy has outperformed the index by 1.7%, 1.6%, 1.6% and 1.9% over the trailing one-, three-, and five-year and since inception periods.
Fees	Highly Advantageous	• Commingled Fund: Effective fee of 0.65% on all assets. Ranks in the first quartile of respondents.

Fisher Asset Management

Rating Criteria	Rating	Rationale
Overall	Not Advantageous	
Organization	Advantageous	• Fisher Investments is a 100% family and employee-owned asset management firm based in Woodside, CA. • The firm manages roughly $61 billion in assets across a variety of equity and fixed income strategies, with $8.2 billion in the Emerging Markets strategy.
Team	Advantageous	• Fisher's investment team is led by their Investment Policy Committee, which includes four senior investors, including the firm's founder, Kenneth Fisher. • The firm boasts a deep team of investors, although they support a number of different strategies and there has been moderate turnover at the analyst level and there was a notable recent departure on the Investment Policy Committee.
Investment Philosophy	Advantageous	• Fisher utilizes a top-down investment approach to analyze economic, political and sentiment drivers in order to develop portfolio themes. The firm also employs more traditional, bottom-up stock research. The contribution from each is roughly 2/3 top-down and roughly 1/3 bottom-up.
Investment Process	Advantageous	• The Investment Policy Committee determines country and sector weights as a result of the team's top-down research. • From there, the firm's Securities Research Team then conducts bottom-up fundamental research to identify the most attractive stocks to fill those weightings. • The end result is a relatively concentrated portfolio of 60-70 stocks.
Performance	Not Advantageous	• Inception Date: 4/2006. Fisher has produced modest excess returns, net of fees, over the longer-term; however, the results have been weak more recently. The strategy has outperformed the index by 1.7%, 1.2%, 1.3% over the trailing five- and ten-year and since inception periods, but the strategy has underperformed by -1.9% and -1.2% over the one- and three-year periods.
Fees	Not Advantageous	• Collective Investment Trust: Effective fee of 1.05% on all assets. Ranks in fourth quartile of respondents.

GAM Holding AG

Rating Criteria	Rating	Rationale
Overall	Not Advantageous	
Organization	Advantageous	• GAM Investments (ticker: GAM) is a publicly-traded asset management firm based in Switzerland. The firm has gone through a number of parent companies throughout its history. In 1999, it was acquired by UBS, who then sold it to Julius Baer in 2005. In 2009, GAM separated from Julius Baer and listed its shares on the Six Swiss Exchange. • GAM manages $163B across a range of asset classes and subsidiary investment firms. The Emerging Markets Strategy has $1.2B in AUM.
Team	Advantageous	• The strategy is managed by lead PM Tim Love. Prior to joining GAM in 2012, Mr. Love managed an EM long/short product at another firm. Mr. Love is supported by a co-PM. • The PMs cover all areas of the emerging markets universe, but draw from the support of the GAM Asia ex-Japan investment team. The team consists of four people.
Investment Philosophy	Advantageous	• GAM believes that market perception often lags reality during times fundamental, political, and economic change. They believe this dynamic is particularly prevalent within emerging markets. The believe an approach which combines top-down and bottom-up analysis can add value in emerging markets over time.
Investment Process	Not Advantageous	• The investment process combines bottom-up, fundamental research with a top-down overlay. The first step in the process is a screen that is conducted weekly which scores stocks based on valuation, quality, growth, momentum, and currency factors. • Each stock is ranked based on the output of the screen, which is compared to its historical average. The most undervalued stocks are then researched by the team. Attractive stocks are then compared to their top-down views, which are generated using two macro models. • Portfolios are diversified across 150 to 200 stocks, with relatively low active share.
Performance	Advantageous	• Inception Date: 4/2012. GAM has produced attractive returns over all trailing periods, but the track record is somewhat short when compared to other respondents with strong performance. The strategy has outperformed by 8.0%, 4.5%, 3.6% and 3.9% over the trailing one-, three-, and five-year and since inception periods, net of fees, respectively.
Fees	Advantageous	• Commingled Fund: Effective fee of 0.80% on all assets. Ranks in second quartile of respondents.

Goldman Sachs Asset Management

Rating Criteria	Rating	Rationale
Overall	Not Advantageous	
Organization	Advantageous	• Goldman Sachs Asset Management is a wholly-owned subsidiary of Goldman Sachs Group (NYSE: GS), a large, multinational, publicly traded investment bank. Goldman Sachs is one of the largest, most well-known investment banking organizations in the world. • GSAM manages at total of $1.3T in AUM across a range of equity, fixed income, alternatives, and multi-asset investment products. The Global Emerging Markets Equity strategy has $5.2B in AUM.
Team	Not Advantageous	• The investment team consists of two PMs and nineteen analysts. Analysts support other GSAM investment teams and are not dedicated to the product. Analyst turnover has been commonplace historically. • The PM team includes Hiren Dasani and Basak Yavuz. Mr. Dasani has been a PM on the product since 2007 and Mr. Yavuz joined as PM in 2012.
Investment Philosophy	Advantageous	• GSAM believes that outsized investment returns can be earned by investing in sound businesses that trade at a discount to their intrinsic values. "Sound businesses" is defined as companies who can earn returns on capital in excess of their local economy for prolonged periods of time.
Investment Process	Advantageous	• The investment process is driven by bottom-up, fundamental analysis. Stock selection is entirely bottom-up. • Analysts look for companies with strong industry positions, improving fundamentals (i.e. cash flow and earnings growth), with good management teams. Analysts value stocks using a cash-flow-based methodology and propose them as investment candidates to the PMs. • Portfolios are diversified across 120-150 stocks. Exposures are managed with relatively tight benchmark-relative constraints.
Performance	Advantageous	• Inception Date: 4/1995. GSAM's returns have been strong over the short- and medium-term, but relatively weak over longer-term periods. The strategy has outperformed the index by 5.8%, 3.9%, 3.9%, 1.3%, and 0.6% over the trailing one-, three-, five-, and ten-year and since inception periods, net of fees.
Fees	Not Advantageous	• Separate Account: Effective fee of 1.00% on all assets. Ranks in third quartile of respondents.

J O Hambro Capital Management

Rating Criteria	Rating	Rationale
Overall	Advantageous	
Organization	Advantageous	• J.O. Hambro Capital Management ("JOHCM") was founded in 1993 by James Hambro and Christopher Mills. The firm is based in London, England and is a subsidiary of BT Investment Management, a publicly-listed Australian investment management firm. • JOHCM manages $42B across 10 global, international, and emerging markets equity strategies. The Global Emerging Markets Opportunities strategy has $1.7B in assets.
Team	Advantageous	• The strategy is managed by James Syme and Paul Wimborne. Mr. Syme is the primary decision-maker. Prior to joining JOHCM, the PMs managed an emerging markets strategy together at Baring Asset Management. They are supported by one analyst.
Investment Philosophy	Advantageous	• JOHCM believes that top-down and bottom-up factors are critical to investment success in EM, but that most managers focus on the latter while largely ignoring the former. For them, they believe investing goes right or wrong at the country level. By allocating towards attractive countries and investing in quality/growth stocks within those countries, JOHCM believes they can add-value over time.
Investment Process	Advantageous	• The process starts by developing a list of stocks with good bottom-up stories. They seek companies with good and/or accelerating growth, strong business models and management teams, and reasonable valuations. The team finds these stocks by using a series of up-front screens which proxy for the bottom-up characteristics they look for in stocks. • From there, the PMs perform top-down analysis. They formulate country and industry views by analyzing politics, economic trends and trend changes, countries' fiscal and financial backdrop, cross-border flows, etc. From there, they identify stocks within their buy-list which are best positioned against their top-down views. • Portfolios are diversified and benchmark-aware, and generally hold around 60 stocks.
Performance	Not Advantageous	• Inception Date: 7/2011. JOHCM's performance has been somewhat weak over its relatively short track record. The strategy has underperformed the index, net of fees, by -4.3% and -1.4% over the trailing one- and three-year. While the strategy has outperformed by 1.7% and 0.7% over the trailing five-year and since inception periods, these results are less strong when compared to other managers.
Fees	Not Advantageous	• Mutual Fund: Effective fee of 1.29% on all assets. Ranks in fourth quartile of respondents.

JP Morgan Asset Management

Rating Criteria	Rating	Rationale
Overall	Advantageous	
Organization	Advantageous	• J.P. Morgan Investment Management is the U.S. arm of J.P. Morgan Asset Management, a global financial services company headquartered in New York, NY. J.P. Morgan's ultimate parent, J.P. Morgan Chase & Co. was originally founded by Aaron Burr and Alexander Hamilton in 1799. J.P. Morgan is a publicly traded company (NYSE: JPM). • J.P. Morgan Asset Management has $2 trillion in assets under management. The GEM Discovery strategy has $4B in AUM.
Team	Advantageous	• The JP Morgan GEM Discovery strategy is managed by Leon Eidelman. Mr. Eidelman has sixteen years of investment experience, all of which have been at JP Morgan. He is supported by two co-PMs. • The PMs are supported by a team of 100 equity analysts located in eight locations across the globe. In addition to the GEM Discovery strategy, the analysts support JP Morgan's other global, regional, and single country products.
Investment Philosophy	Advantageous	• J.P. Morgan's investment approach is predicated upon two core principles, 1) understand what we own, and 2) value what we understand. They believe successful emerging markets equity investing is best achieved using fundamental, bottom-up research.
Investment Process	Advantageous	• Analysts seek to identify and research attractive, high quality emerging markets stock ideas. The team's idea generation and fundamental research is based on finding companies with solid underlying economics, attractive and long duration growth prospects, and good corporate governance. • If a business is deemed to be sufficiently high quality by the analyst's standards, the analyst will value the company and generate a 3-5 year expected return estimate. • Portfolios use low turnover and hold roughly 60-100 stocks. The GEM Discovery product has a significant tilt towards small caps and will invest in frontier market countries.
Performance	Highly Advantageous	• Inception Date: 12/1997. JP Morgan has produced a compelling track record over all trailing periods. The strategy has outperformed by 5.6%, 4.8%, 3.5%, 5.0%, and 3.5% over the trailing one-, three-, five-, and ten-year and since inception periods, net of fees.
Fees	Not Advantageous	• Collective Investment Trust: Effective fee of 0.95% on all assets. Ranks in third quartile of respondents.

Lazard Asset Management

Rating Criteria	Rating	Rationale
Overall	Advantageous	
Organization	Advantageous	• Lazard Asset Management is a large global investment management firm headquartered in New York, NY. The firm was founded in 1970 and is a subsidiary of Lazard Ltd, a publicly traded Bermuda corporation. • Lazard Asset Management manages approximately $226B across a large platform of equity, fixed income, and alternatives strategies. The Emerging Markets Equity strategy was incepted in July 1994 and has $35B in AUM.
Team	Advantageous	• The team is led by PM James Donald. Mr. Donald is one of the longest tenured EM PMs in the space. He has managed the product since 1996. • Mr. Donald is supported by two co-PMs. The co-PMs have worked at Lazard for more than fifteen years. A centralized group of analyst support the various Lazard investment teams. The PMs utilize Lazard's sixty-six analysts for research support.
Investment Philosophy	Advantageous	• The investment team believes that companies often sustain high levels of financial productivity for longer than the market expects, which results in mispricing and valuation opportunities. The team seeks to conduct bottom-up, fundamental analysis on the relationship between valuation and financial productivity among companies to add value over time.
Investment Process	Advantageous	• The investment process starts with proprietary screens for strong and improving financial productivity and compelling relative valuation. This model is supplemented by sector-specific research and screens run by specialist analysts and portfolio managers on the team. • Next, the team conducts bottom-up research with channel checks, identifies key profit drivers, and studies cash flows and their sensitivity to company-specific and exogenous factors. Management quality, competitive position, and other factors are also analyzed. After a review of financials and a scenario analysis (bull, bear, and base cases), stocks with high financial productivity, low valuation, and a narrow range of outcomes (using the scenario analysis) are selected for inclusion in the portfolio. • The portfolio typically holds 60-80 securities with a single stock limit of 5%. Turnover ranges from 50-75% per annum.
Performance	Not Advantageous	• Inception Date: 7/1994. Lazard has one of the longest track records in the EM space. However, the strategy's performance has been relatively weak when compared to other managers. Lazard has underperformed the index over the trailing one-, three-, and five-year periods by -7.1%, -0.2%, -1.2%, net of fees. Lazard has outperformed over the trailing ten-year and since inception by 0.5% and 1.3%.
Fees	Not Advantageous	• Mutual Fund: Effective fee of 1.09% on all assets. Ranks in fourth quartile of respondents.

LGM Investments

Rating Criteria	Rating	Rationale
Overall	Not Advantageous	
Organization	Advantageous	• LGM Investments was founded in 1991 and is based in London, UK. The firm is a wholly-owned subsidiary of the Bank of Montreal, a publically traded bank. • The firm manages $2.6 billion across two frontier and emerging markets equity strategies, with $756 million in the Global Emerging Markets and Income strategy.
Team	Not Advantageous	• The strategy is managed by lead PM Rishikesh Patel. Mr. Patel became the lead PM in March 2016, after the prior PM, Rasmus Nemmoe, left the firm. • Mr. Patel is supported by two co-PMs. The PMs are supported by two analysts.
Investment Philosophy	Advantageous	• LGM believes traditional market capitalization indexes do not represent an efficient investment opportunity set. They believe a benchmark-agnostic and concentrated portfolio of high quality companies with secular growth trends can deliver superior risk-adjusted returns over the long term.
Investment Process	Advantageous	• The process begins with in-depth fundamental research. Analysts comb the investment universe for high quality companies generating excess returns over their cost of capital on a full-cycle basis. They prefer asset light business models with modest capital needs, robust balance sheets, and proven management teams. • Companies that meet LGM's quality criteria are considered for inclusion if they are trading at a discount to fair value. Portfolios are loosely constrained by sector to ensure adequate diversification, with sector and country allocations ultimately resulting from bottom-up security selection. • Portfolios are concentrated and hold 40 to 60 stocks.
Performance	Not Advantageous	• Inception Date: 10/2007. LGM's returns have been relatively weak. The strategy has underperformed the index over the trailing one-, three-, and five-year periods by -8.1%, -1.5%, and -1.1%, net of fees. The product has modestly outperformed over ten-years and since inception, with excess returns of 1.2% and 0.9%.
Fees	Highly Advantageous	• Collective Investment Trust: Effective fee of 0.70% on all assets. Ranks in first quartile of respondents.

Macquarie Investment Management

Rating Criteria	Rating	Rationale
Overall	Advantageous	
Organization	Advantageous	• Macquarie, formerly known as Macquarie Investment Advisors, is a Philadelphia-based asset management firm that is wholly-owned by Macquarie Group (ASX: MQG), a publically-traded Australian investment banking and financial services firm. • Macquarie manages $185 billion in assets, with $6.7 billion in the Emerging Markets Equity strategy.
Team	Advantageous	• The strategy is led by Emerging Markets CIO, Liu-Er "Nu" Chen, who is supported by three dedicated research analysts. • The Emerging Markets Team is located in the firm's Boston, MA office.
Investment Philosophy	Advantageous	• Macquarie believes that although price and intrinsic value are positively correlated over the long-term, short-term divergences can emerge. They believe a process grounded on fundamental research is best positioned to take advantage of these short-term deviations. • Macquarie seeks to invest in companies with sustainable franchises, attractive growth prospects, trading at a discount to intrinsic value.
Investment Process	Advantageous	• The team generates ideas from management meetings, company on-site visits, sell-side analyst reports, trade-shows, and news flow. Additionally, they use a quantitative screen that screens companies based on valuation, profitability, balance sheet strength, EPS growth, and price momentum. • Fundamental, bottom-up research is the core of Macquarie's investment process, however the team remains aware of micro- and macroeconomic factors as well. • Portfolios are benchmark-aware and hold between 110-170 stocks.
Performance	Advantageous	• Inception Date: 10/2005. Macquarie has underperformed the index over the trailing one-year period by -1.1%, net of fees. Although the strategy has outperformed over the three-, five-, and ten-year and since inception periods, when compared to other managers over similar time periods, the results have been more muted, with excess returns of 4.0%, 1.8%, 1.0%, and 1.7%.
Fees	Not Advantageous	• Mutual Fund: Effective fee of 1.32% on all assets. Ranks in fourth quartile of respondents.

Manulife Asset Management

Rating Criteria	Rating	Rationale
Overall	Not Advantageous	
Organization	Advantageous	• Manulife Asset Management is the asset management arm of Manulife Financial Corporation. Manulife Financial Corporation (NYSE: MFC) is publicly traded Canadian multinational insurance and financial services company. • Manulife Asset Management manages a total of $394B in AUM across equity, fixed income, multi-asset, and alternative investment products. The Emerging Markets Equity strategy has $1.3B in AUM.
Team	Advantageous	• The strategy is managed by lead PM Kathryn Langridge. Ms. Langridge joined Manulife in 2014. Prior to that she managed a fund at Jupiter Asset Management from 2010 to 2014, and prior to that she was with LGM Investments EM team. • Ms. Langridge is supported by two co-PMs and one analyst.
Investment Philosophy	Advantageous	• Manulife believes that quality businesses with the ability to compound value creation over time are often misunderstood by market participants. They believe that a portfolio of high quality/high return companies, supported by structural trends, trading at attractive valuations, can outperform over time.
Investment Process	Advantageous	• The team screens the universe of EM stocks for market capitalizations greater than $500m. From there, they look for companies with attractive quality characteristics and good growth prospects. • Attractive candidates are then subjected to bottom-up, fundamental research. The team verifies that quality of the business and its growth prospects. A model is produced for every stock to estimate its intrinsic value. • Portfolios are constructed on a bottom-up basis. Stocks with the greatest risk/reward ratio generally have the highest weights. The portfolio holds 60-70 stocks and diversified across geographies, sectors, and industries.
Performance	Not Advantageous	• Inception Date: 12/2010. Manulife's performance has been good over the short-term. However, the products results have been modest over longer periods, but weak when compared to other managers. The strategy has matched the index, net of fees, over the trailing three-year. Over the trailing five-year and since inception periods, the strategy has outperformed by 1.7% and 1.0%.
Fees	Advantageous	• Commingled Fund: Effective fee of 0.88% on all assets. Ranks in second quartile of respondents.

Marathon Asset Management

Rating Criteria	Rating	Rationale
Overall	Not Advantageous	
Organization	Advantageous	• Marathon Asset Management is a large, independent investment firm based in London. The firm was founded in 1986 by Neil Ostrer, Bill Arah, and Jeremy Hosking. Current employees own 70% of the firm, and the remaining 30% is held by co-founder Jeremy Hosking, who left Marathon in 2012, after a dispute with the other Marathon partners. • Marathon manages $62B across five global, international, and emerging markets equity products. The Emerging Markets Equity strategy has $356M in AUM.
Team	Not Advantageous	• The product is managed by Lead PM Michael Godfrey, who joined the firm in 2012. Mr. Godfrey is supported by one co-PM, David Cull, who joined the firm in 2012.
Investment Philosophy	Advantageous	• The Marathon team believes that attractive investment opportunities arise as a result of capita cycle conditions and can be identified through thorough, bottom-up qualitative analysis on companies and industries. The team aims to invest in companies that are positioned to deploy capital effectively and benefit from the current state of a particular industry's capital cycle.
Investment Process	Advantageous	• The investment process begins with an analysis of industry capital cycles. The team seeks to understand whether a particular industry is in the high return (growth) phase or the depressed return (value) phase of the capital cycle. • In high return industries, the team seeks to invest in firms that enjoy competitive advantages that prevent new entrants or increased supply from eroding margins. For depressed return industries, the team looks to invest in companies where industry supply and competition are declining, which will allow companies with cost advantages to benefit as the capital cycle turns. • The team typically invests in companies where management is incentivized to focus on long-term growth, returns on invested capital are improving, and free cash flow is positive and stable. The portfolio holds 100 to 150 stocks.
Performance	Not Advantageous	• Inception Date: 3/2013. Marathon's track record remains relatively short. However, since inception, performance has been somewhat weak. The strategy has underperformed over the trailing one-year period by -1.3%. Marathon has outperformed over the trailing three- and five-year and since inception periods by 1.8%, 0.4% and 0.7%, net of fees.
Fees	Not Advantageous	• Commingled Fund: Effective fee of 1.24% on all assets. Ranks in fourth quartile of respondents.

Martin Currie

Rating Criteria	Rating	Rationale
Overall	Not Advantageous	
Organization	Advantageous	• Martin Currie Investment Management an asset management boutique based in Edinburgh, Scotland. The firm is a wholly-owned subsidiary of Legg Mason (NYSE: LM), a publicly traded investment management firm based in Baltimore, MD. • Martin Currie manages $19B in AUM across equity, alternatives, and multi-asset products. The Global Emerging Markets Equity strategy has $2.2B in AUM.
Team	Advantageous	• The product is managed by Lead PM Kim Catechis. Mr. Catechis joined the firm in 2010. Previously, he was the Head of Global Emerging Markets at Scottish Widows Investment Partnership. • Mr. Catechis is supported by five co-PMs. The team has experienced modest turnover of the last 6 years (2 PMs and one analyst resigned).
Investment Philosophy	Advantageous	• The team believes that the market is inefficient in regards to forecasting (and thus, valuing) the value creation of companies over longer periods of time. They believe that fundamental research and a longer-term perspective can add-value in emerging markets.
Investment Process	Advantageous	• The investment process is predominantly bottom-up. Company research is conducted within a sector framework, wherein each investment team member has research responsibilities. • The team's research process seeks to assess a company's financial position. Team members analyze the drivers of company financial performance relative to industry peers and the world within their areas of coverage. Qualitative input from meetings with company management, industry competitive analysis, and ESG risk factors are incorporated within their forecasts. Additionally, top-down macroeconomic and political risks are incorporated as well. • Portfolios are benchmark-aware and constrained versus the index. The portfolio generally holds 45 to 50 stocks.
Performance	Not Advantageous	• Inception Date: 1/2003. Martin Currie's has a long track record, but the results have been mixed. The strategy has performed strongly over the short-term, with excess returns of 8.1% over the recent one-year period, net of fees. However, the strategy has underperformed the index, net of fees, over the trailing ten-year and since inception periods by -0.4% and -0.2%, respectively.
Fees	Advantageous	• Mutual Fund: Effective fee of 0.85% on all assets. Ranks in second quartile of respondents.

Mountain Pacific Advisors

Rating Criteria	Rating	Rationale
Overall	Not Advantageous	
Organization	Advantageous	• Mountain Pacific Advisors (MPA) is an independent investment management boutique based in Bellevue, WA. The firm was founded in 2009 by Ronald Liesching, Jolanta Wysocka, and Mark Miller. The firm is 100% employee-owned. • MPA manages roughly $900M in AUM across currency risk overlay strategies and a single EM equity product. The Emerging Markets Equity strategy has $596M in AUM.
Team	Not Advantageous	• PM Jolanta Wysocka is the lead PM of the strategy. Ms Wysoka co-founded MPA in 2009, having previously worked as a portfolio strategist at Russell Investments. • The strategy is supported by Dan Bond (Chief Economist) and one analyst, Marilyn Belter.
Investment Philosophy	Advantageous	• MPA believes that a quantitative investment process focused on top-down country allocations can outperform the index by 2.5%-4% per year over a full market cycle. MPA believes that it is easier and more effective to avoid bad companies in EM, which itself should add-value over time. Thus, their quantitative approach is based on risk measurement, as opposed to return forecasting. They believe that a quantitative process avoids the behavioral biases that can infect traditional fundamental investment approaches.
Investment Process	Not Advantageous	• Mountain Pacific Advisors uses a quantitative, statistical investment process to analyze markets. The process starts by screening out securities which are identified as high risk (i.e. exhibit negative statistical attributes). • From there, MPA's quantitative models produce a co-variance/correlation matrix for the remaining securities. Country allocations are optimized based on a given market's liquidity. Portfolios are rebalanced across countries based on realized risk statistics. A judgmental process is used before all portfolio transactions for quality control. • Portfolios are diversified across 250 to 600 stocks to minimize stock-specific risk. Tracking error is low (~3%).
Performance	Not Advantageous	• Inception Date: 10/2012. Mountain Pacific Group's live track record is relatively short. The results have been weak. Since managing live capital, the strategy has underperformed the index. The product has underperformed over the trailing one-, three-, and five-year and since inception periods by -3.1%, -0.3%, -1.1%, and -0.8%, net of fees, respectively.
Fees	Not Advantageous	• Commingled Fund: Effective fee of 1.00% on all assets. Ranks in third quartile of respondents.

Newton Investment Management

Rating Criteria	Rating	Rationale
Overall	Advantageous	
Organization	Advantageous	• Newton Investment Management is wholly owned subsidiary of BNY Mellon (NYSE: BK), a publicly traded banking and financial services company based in New York, NY. Newton was founded in 1978 and is based in London, England. • The firm manages $70B in AUM across equity, fixed income, and multi-asset products. The Global Emerging Markets strategy has $991M in AUM.
Team	Advantageous	• The investment team is led by PM Robert Marshall-Lee. Mr. Marshall-Lee joined the firm in 1999 and has twenty-three years of investment experience. • Mr. Marshall-Lee is supported by three co-PMs (Zeo Kan, Naomi Waistell, and Sophia Whitbread). The investment team is region/sector coverage responsibilities.
Investment Philosophy	Advantageous	• Newton believes that investors with a long time horizon can identify exploitable investment opportunities due to cross-border pricing anomalies, inadequate fundamental analysis, and the over-diversification of portfolios by other investors. They believe that the combination of theme identification, rigorous fundamental, and high conviction portfolios can outperform over time.
Investment Process	Advantageous	• Newton's investment process focuses on top-down themes and bottom-up analysis. The process starts by screening the universe for stocks with attractive valuations and good fundamentals. The investment team focuses on stocks that are identified as potential beneficiaries of long-term, structural trends. • Fundamental analysis is predicated on the assessment of business quality, competitive positioning, and growth prospects. From there, attractive candidates are valued using a variety of valuation methodologies to estimate the company's intrinsic value, while controlling for various risk factors specific to the company. • Portfolios are concentrated and generally hold 60-70 stocks and diversified across geographies, sectors, and market cap.
Performance	Advantageous	• Inception Date: 6/2011. Newton has delivered good performance since inception. However, the track record is relatively short when compared to other managers. The strategy has underperformed by -1.8% over the trailing one-year period. It has outperformed by 0.4%, 3.1%, and 3.5% over the trailing three- and five-year and since inception, net of fees.
Fees	Highly Advantageous	• Collective Investment Trust: Effective fee of 0.48% on all assets. Ranks in first quartile of respondents.

Oaktree Capital Management

Rating Criteria	Rating	Rationale
Overall	Not Advantageous	
Organization	Advantageous	• Oaktree Capital Management (NYSE: OAK) is a publicly traded investment management firm based in Los Angeles, CA. The firm was founded in 1995 by Howard Marks, Bruce Karsh, and four other co-founders. It is primarily known for its credit and alternative investment strategies. • The firm manages $121B in AUM, with the majority of assets in its alternative and fixed income products. The Emerging Markets Equity strategy has $4.1B in AUM.
Team	Not Advantageous	• The investment team consists of two co-PMs: Frank Carroll and Tim Jensen. Messrs. Carrol and Jensen joined the firm in 1999 and 2000, respectively, and have been PMs of the EM strategy since its inception in 2011.
Investment Philosophy	Advantageous	• Oaktree believes that exploitable investment opportunities exists within emerging markets due to its high rate of change, inherently high volatility, lack of research coverage and information asymmetries. They believe that an opportunistic, value-oriented approach focused on exploiting mis-pricings that occur for non-fundamental reasons, can add value over time.
Investment Process	Advantageous	• The investment process is predominantly bottom-up. The team applies are variety of fundamental techniques to identify investment opportunities. The two PMs segment the universe by sectors and analyze stocks within their defined coverage areas. • Attractive opportunities are analyzed using a bottom-up, value-oriented framework. Additionally, the team will incorporate qualitative information from company management meetings and external research in their valuation judgements. • Portfolios are diversified across 60-70 stocks. Country and sector exposures are constrained versus the index.
Performance	Not Advantageous	• Inception Date: 7/2011. Oaktree's performance has been weak since inception. The strategy has underperformed the index over the trailing one-, three- and five-year periods by -0.1%, -0.0%, and -1.2%, respectively, net of fees. Performance has roughly matched the index since inception.
Fees	Not Advantageous	• Commingled Fund: Effective fee of 0.95% on all assets. Ranks in third quartile of respondents.

Principal Global Investors

Rating Criteria	Rating	Rationale
Overall	Not Advantageous	
Organization	Advantageous	• Principal Global is an equity investment management firm headquartered in Des Moines, IA. The firm was founded in 1988 as a dedicated asset management arm of the Principal Financial Group (NASDAQ: PFG), a publicly traded financial services company. • Principal manages $93B across a bench of domestic, international, and global equity strategies. The Emerging Global Leaders product has $3.4B in assets under management.
Team	Advantageous	• The investment team consists of three investment professionals. Paul Blankenhagen, Juliet Cohn, and Mihail Dobrinov co-manage the portfolio. • The co-PMs are supported by eight research analysts, who also support other Principal investment strategies.
Investment Philosophy	Advantageous	• Principal believes that three key characteristics distinguish attractive stocks: 1) positive and sustainable fundamental change, 2) rising investor expectations, 3) attractive relative valuations. Additionally, they believe that fundamental combined with quantitative insights can produce superior investment outcomes, when compared to using both tools isolation.
Investment Process	Advantageous	• The process begins with a stock ranking framework (the "Global Research Platform") that ranks stocks based on fundamental characteristics relative to regional sector peers. The top 20% of this list is selected for further due diligence. • The team then reviews financial statements, news flow, regulatory filings, and sell-side research to select stocks that offer the most compelling relative value/growth tradeoffs. At this juncture, the team focuses on comparing their assessment of a stock to other market participants by assessing relative value and analyst expectations. • The portfolio is concentrated in 30-50 stocks. Country, sector, and index exposures are constrained versus the index.
Performance	Advantageous	• Inception Date: 1/2014. Principal's track record is relatively short when compared to other managers. However, since inception, performance has been strong. The strategy has outperformed over the trailing one- and three-year and since inception periods, net of fees.
Fees	Not Advantageous	• Separate Account: Effective fee of 1.01% on all assets. Ranks in fourth quartile of respondents.

Putnam Investments

Rating Criteria	Rating	Rationale
Overall	Not Advantageous	
Organization	Advantageous	• Putnam Investments is a large, independent investment management firm based in Boston, MA. The firm was founded in 1937 by George Putnam. • The firm manages $169B across a range of asset classes and investment products. The Emerging Markets Equity strategy has $512M in AUM.
Team	Not Advantageous	• The Emerging Markets Equity strategy is managed by Lead PM Daniel Grana. Mr. Grana has managed the product since 1999. • At Putnam, investment teams are supported by a large team of centralized research analysts. Mr. Grana utilizes Putnam's eight centralized, emerging markets analysts for fundamental research support.
Investment Philosophy	Advantageous	• Putnam's investment strategy is predicated on fundamental and quantitative research techniques within a top-down and bottom-up framework. The uses of top-down and bottom-up techniques is believed to combine uncorrelated sources of alpha, which is expected to outperform passively managed products over time.
Investment Process	Not Advantageous	• The process begins by screening the universe for stocks with market capitalizations greater than $2B. From there, the universe is culled based on top-down and bottom-up factors. • Bottom-up research seeks to identify attractive investment candidates based on a variety of valuation techniques. Analysts assess company management teams and fundamental prospects and look for companies trading at a discount to intrinsic value. Top-down factors are focused on government policy, corporate governance, and political/economic stability. • The portfolio is constructed using a proprietary, quantitative model, which ascribes stock weightings based on the model's alpha scores. Portfolios are diversified across 100-130 stocks, with exposures constrained versus the index.
Performance	Not Advantageous	• Inception Date: 8/1997. Putnam's returns have been relatively strong over the short-term. The strategy has outperformed over the trailing one-, three-, and five-year periods by 8.6%, 3.2%, and 2.9%, respectively, net of fees. However, over the long-term, the results have been much weaker. The strategy has roughly matched the index over the ten-year and has outperformed by 0.8% since inception.
Fees	Highly Advantageous	• Commingled Fund: Effective fee of 0.60% on all assets. Ranks in first quartile of respondents.

Quantitative Management Associates

Rating Criteria	Rating	Rationale
Overall	Not Advantageous	
Organization	Advantageous	• Quantitative Management Associates (QMA) is a Newark, NJ-based asset management firm that was founded in 1975. The firm is a wholly-owned subsidiary of Prudential Financial (NYSE: PRU), a large publically-traded financial services and insurance company. • The firm manages $128B in assets across a range of equity strategies, with $2.2B in the Emerging Markets All Cap Equity strategy.
Team	Advantageous	• The strategy and is led by Jacob Pozharny. Mr. Pozharny is supported by fourteen PMs and fourteen research analysts. Prior to October 2017, QMA's equity products were segmented by region and investment style, but investment teams are now united across a single platform.
Investment Philosophy	Advantageous	• QMA believes the systematic application of rigorously evaluated company fundamentals can add alpha over the long-term. • The strategy uses an adaptive alpha model that incorporates valuation, news, financial momentum and quality factors.
Investment Process	Advantageous	• QMA uses a purely quantitative approach that emphasizes bottom-up stock selection. The first step in the process is classifying stocks within sectors based on their long-term growth rates. Model factors are tailored and weighted by sector. • Within sectors, the model creates alpha scores using valuation, news, financial momentum and quality factors. Alphas are then fed into a portfolio optimizer for portfolio construction. • The Emerging Markets All Cap Equity strategy is an all cap strategy and holds 250+stocks.
Performance	Not Advantageous	• Inception Date: 5/2009. QMA's returns have been mixed since inception and weak over the recent short- to medium-term. The strategy has underperformed the index over the trailing one- and three-year periods by -0.0% and -0.4%, net of fees. Over the five-year and since inception periods, QMA has modestly outperformed by 0.1% and 1.7%, respectively, net of fees.
Fees	Highly Advantageous	• Collective Investment Trust: Effective fee of 0.74% on all assets. Ranks in first quartile of respondents.

RBC Global Asset Management

Rating Criteria	Rating	Rationale
Overall	Advantageous	
Organization	Advantageous	• RBC Global Asset Management is the asset management arm of Royal Bank of Canada (NYSE: RY), a publically-traded Canadian banking company. • The firm manages $330B in assets a range of equity and fixed income products. The Emerging Markets Equity strategy has $6.5B in AUM.
Team	Advantageous	• Philippe Langham, Head of Emerging Markets Equities, is responsible for the investment decision making for the strategy. He is supported by seven co-PMs.
Investment Philosophy	Advantageous	• RBC firmly believes strong management is fundamental to a stock's performance, quality franchises outperform, and sustainability matters over time. However, valuation also matters, and investors must be careful not to assume the risk of overpaying for a stock.
Investment Process	Advantageous	• RBC uses a bottom-up approach augmented by a top-down macroeconomic overlay that leverages both qualitative and quantitative tools. The team utilizes a quantitative tool to source ideas. The quantitative tools screen for stocks based on quality variables, value variables, and momentum variables. • Additionally, the team looks for long-term structural trends to focus their research on certain sectors best positioned to take advantage of those trends. Once ideas are identified, the team performs fundamental analysis, which includes management meetings and in-depth financial reviews. • Portfolios are benchmark-aware and constrained at the sector and country level and typically hold 50-60 stocks.
Performance	Advantageous	• Inception Date: 4/2010. RBC has produced modest excess returns since inception. However, over the short- to medium-term the results have been relatively weak. The strategy has underperformed the index by -4.4% and -1.2%, net of fees. RBC has outperformed over the trailing five-year and since inception periods by 1.2% and 1.8%, net of fees.
Fees	Advantageous	• Commingled Fund: Effective fee of 0.90% on all assets. Ranks in second quartile of respondents.

Schroder Investment Management

Rating Criteria	Rating	Rationale
Overall	Not Advantageous	
Organization	Advantageous	• Schroders is a global financial firm headquartered in London, UK. Schroders plc was founded in 1804 by the Schroder family. The Schroder family and related trusts hold 48% of the equity of the firm, Schroders employees hold 5% of firm equity, and the remaining 47% publically traded on the London Stock Exchange (LSE: SDR). • The firm manages $598B in AUM across a broad range of strategies including equity, fixed income, multi-asset, alternatives, and real estate products. The Global Emerging Markets Core strategy has $30B in AUM.
Team	Not Advantageous	• Tom Wilson serves as the Head of Emerging Markets and is the Lead PM on the product. He has been Lead PM since August 2016, but has been a member of the EM team since 2011. He is supported by three co-PMs, one EM strategist, and one economist. The PMs have regional coverage responsibilities. • Schroders' investment teams are supported by a centralized pool of research analysts who provide fundamental research support.
Investment Philosophy	Advantageous	• Schroders believes a balanced, core investment approach that uses a mix of top-down inputs to guide country allocations and bottom-up stock selection can outperform the index over time.
Investment Process	Advantageous	• The strategy seeks to invest in companies with good quality, growth, and valuation characteristics. Schroders' analysts use proprietary screens that rank companies within their respective universes in order of attractiveness based on: growth (earnings revisions/momentum), quality (ROE and change in ROE), and valuation (earnings yield). • Analysts then evaluate companies' growth prospects, competitive position, financial strength, and quality of management. Their assessments are then fed into a valuation model which arrives at a fair value for the stock. PMs are responsible for stock selection and use analyst stock rankings as a guide. A top-down, quantitative model scores countries based on their relative attractiveness. The model guides the portfolio's country allocations. • The end result is a diversified portfolio of 100-130 stocks. Exposures are constrained versus the index. Tracking error is low.
Performance	Advantageous	• Inception Date: 1/1992. Schroders has one of the longest track records in the EM space. While performance has been relatively good over the short-term, the products long-term results have been weak. The strategy has outperformed the index by 3.3%, 1.9%, 1.0% and 0.6% over the trailing one-, three-, five-, and ten-year periods, net of fees. Over a twenty-six year period, however, Schroders investment approach has narrowly outperformed the index by 0.9%, net of fees.
Fees	Not Advantageous	• Commingled Fund: Effective fee of 1.07% on all assets. Ranks in fourth quartile of respondents.

State Street Global Advisors

Rating Criteria	Rating	Rationale
Overall	Not Advantageous	
Organization	Advantageous	• State Street Global Advisors is the investment management division of State Street Corporation (NYSE: STT), a large, publicly traded financial services and bank holding company. The firm is headquartered in Boston, MA. • State Street manages $2.7T in AUM across a range of passive, enhanced index, and active investment products across asset classes. The Emerging Markets Enhanced product has $6.2B in AUM.
Team	Advantageous	• The product is managed by SSgA's Global Active Quantitative Equity Team. The team consists of four PMs and three analysts. • Head of Portfolio Management/Global Quant, Simon Roe, leads the team. He joined SSgA in 2002.
Investment Philosophy	Advantageous	• The Emerging Markets Enhanced strategy is guided by the belief that 1) markets are inefficient, 2) a systematic process can repeatedly exploit inefficiencies, and 3) proactive research grounded in sound economic logic can enhance returns. SSgA believes that, due to investor behavorial biases, market participants are slow to react to new information. Additionally, market frictions arise due to varying cross-border regulations and information asymmetries. These inefficiencies create alpha opportunities, which SSgA seeks to exploit through their quantitative investment process.
Investment Process	Advantageous	• SSgA uses a fully quantitative investment process. The alpha models scores each stock in the universe based on valuation, sentiment, quality, risk, and other factors. • Valuation signals are calibrated based on both income statement and balance sheet metrics. Sentiment and growth signals are derived from a combination of short- and long-term price and fundamental growth factors. Fundamental Quality and risk factors optimize the output of the model, and place a premium on conservatism. • To minimize the risk of unintended bets, the portfolio is optimized using Axioma. The end result is a diversified portfolio of 500 stocks, with low active risk.
Performance	Advantageous	• Inception Date: 7/2007. State Street has produced consistent outperformance since inception, but excess returns have been low in magnitude. The strategy has outperformed the index over the trailing one-, three-, five-, and ten-year and since inception periods by 0.9%, 1.2%, 0.9%, 0.8%, and 0.7%, net of fees, respectively.
Fees	Highly Advantageous	• Commingled Fund: Effective fee of 0.33% on all assets. Ranks in first quartile of respondents.

TOBAM SAS

Rating Criteria	Rating	Rationale
Overall	Not Advantageous	
Organization	Advantageous	• TOBAM is an independent asset management firm based in Paris, France. The firm was founded in 2005 by Yves Choueifaty, who is a well-known smart beta investment practitioner. The firm is majority employee-owned. Employees own 73% of the stock. CalPERS owns the balance of the firm. • TOBAM manages $9.4B in AUM. The Anti-Benchmark Emerging Markets Equity strategy has $2.5B in AUM.
Team	Advantageous	• All TOBAM investment products are team based. The Portfolio Management and Research team consists of twenty-one investment professionals. Eleven people are dedicated to portfolio management and implementation.
Investment Philosophy	Advantageous	• TOBAM believes that, in order for investors to receive the full risk premium of an asset class, they must achieve maximum diversification. They believe that maximum diversification, however, is not defined by the market cap-weighted index, which are inherently flawed and carry implicit bets. They believe maximum diversification is more aptly defined by their proprietary "Diversification Ratio", which is close statistical kin to minimum variance portfolio measures of risk.
Investment Process	Advantageous	• TOBAM uses a quantitative investment process. The process begins with the construction of a variance/covariance matrix of the investment universe. • TOBAM uses a proprietary model to incorporate information from the covariance matrix to create of universe of stocks that maximizes the "Diversification Ratio" of a theoretical portfolio. Additionally, the model applies an illiquidity penalty to lower liquidity stocks to optimize the trade-off between diversification and liquidity. • The resulting portfolio is then optimized using turnover, mandate guidelines, and other constraints. Portfolios generally hold 160 to 190 stocks. TOBAM's portfolios have relatively high tracking error, but lower than market absolute risk (i.e. standard deviation).
Performance	Not Advantageous	• Inception Date: 7/2011. TOBAM's returns have been weak since TOBAM began managing live capital within the product. While the strategy has outperformed the index over the trailing one-year period by 2.5%, net of fees, it has underperformed over the trailing three- and five-year by -3.3% and -1.1%. Since inception, returns have roughly matched the index, net of fees.
Fees	Not Advantageous	• Commingled Fund: Effective fee of 0.95% on all assets. Ranks in third quartile of respondents.

Trilogy Global Advisors (Emerging Markets Equity)

Rating Criteria	Rating	Rationale
Overall	Not Advantageous	
Organization	Advantageous	• Trilogy Global Advisors is based in New York, City and specializes in global equities. The firm was founded by Bill Sterling in 1999. Prior to founding Trilogy, Mr. Sterling was the Head of Global Equities at Credit Suisse. AMG owns 55% of the firm, with employees holding the balance of the stock. • The firm manages $5.4B in AUM and has suffered persistent outflows over the last five years. Emerging Markets Equity is the firm's flagship EM product. The strategy has $2.7B in AUM.
Team	Advantageous	• The investment team consists of four PMs and nineteen research analysts. Bill Sterling leads the firm's investment activities as CIO. • Analysts perform a variety of functions. Some work as traditional equity analysts, who cover global sectors, while others perform quantitative research functions.
Investment Philosophy	Advantageous	• Trilogy uses a bottom-up, growth-oriented investment approach. They believe that future earnings growth is the key determinant of stocks prices over the long-term. They believe that companies with sustainable earnings power can outperform over time.
Investment Process	Advantageous	• The process begins by screening the universe of EM stocks for companies with greater than $750m in market cap. From there, analysts use traditional investment screens which seek to identify stocks with high historical returns, good financial strength, and positive earnings growth estimates. • Attractive candidates are research further by the team. They seek to verify past financial performance and estimate the magnitude and sustainability of future growth prospects. Analysts create buy lists of stocks. PMs construct portfolios off of the buy list. • Portfolios generally hold 80 to 100 stocks. Exposures are constrained versus the index.
Performance	Not Advantageous	• Inception Date: 4/1997. Trilogy has a long track record in the EM space. Since inception in 1997, the strategy has delivered attractive excess returns of 2.1%, net of fees. However, performance has been relatively weak over the last 10 years. The strategy has outperformed modestly over the trailing one- and three-year periods, with excess returns of 1.9%, 1.4%, but has underperformed of the five- and ten-year by -0.1% and -1.3%, net of fees.
Fees	Advantageous	• Commingled Fund (UCIT): Effective fee of 0.80% on all assets. Ranks in second quartile of respondents.

Trilogy Global Advisors (Emerging Wealth Equity)

Rating Criteria	Rating	Rationale
Overall	Not Advantageous	
Organization	Advantageous	• Trilogy Global Advisors is based in New York, City and specializes in global equities. The firm was founded by Bill Sterling in 1999. Prior to founding Trilogy, Mr. Sterling was the Head of Global Equities at Credit Suisse. AMG owns 55% of the firm, with employees holding the balance of the stock. • The firm manages $5.4B in AUM and has suffered persistent outflows over the last 5 years. Emerging Markets Wealth Equity is an adaptation of the firm's flagship Emerging Markets Equity product. The strategy has $1.2B in AUM.
Team	Advantageous	• The investment team consists of four PMs and nineteen research analysts. Bill Sterling leads the firm's investment activities as CIO. • Analysts perform a variety of functions. Some work as traditional equity analysts, who cover global sectors, while others perform quantitative research functions.
Investment Philosophy	Advantageous	• Trilogy uses a bottom-up, growth-oriented investment approach. They believe that future earnings growth is the key determinant of stocks prices over the long-term. They believe that companies with sustainable earnings power can outperform over time.
Investment Process	Advantageous	• The process begins by screening a universe of EM stocks and developed market-listed stocks that have revenues/earnings tied to emerging market economies. Developed-market listed stocks must have at least 20% of their revenues derived from emerging markets. From there, analysts use traditional investment screens which seek to identify stocks with high historical returns, good financial strength, and positive earnings growth estimates. • Attractive candidates are research further by the team. They seek to verify past financial performance and estimate the magnitude and sustainability of future growth prospects. Analysts create buy lists of stocks. PMs construct portfolios off of the buy list. • Portfolios generally hold 70-80 stocks. Exposures are constrained versus the index.
Performance	Advantageous	• Inception Date: 4/2011. The Trilogy Emerging Wealth track record is relatively short. Its use of developed market-listed stocks also make benchmarking this strategy more difficult. Thus far, the results have been good. The strategy has outperformed the index by 3.9%, 2.8%, 2.6%, and 2.7%, net of fees, over the trailing one-, three-, and five-year and since inception periods.
Fees	Advantageous	• Commingled Fund (UCIT): Effective fee of 0.80% on all assets. Ranks in second quartile of respondents.

UBS Asset Management

Rating Criteria	Rating	Rationale
Overall	Advantageous	
Organization	Advantageous	• UBS Asset Management is the asset management division of UBS Group AG (NYSE: UBS), a large, publicly traded, multinational investment bank located in Switzerland. • UBS manages $831B in AUM. The Emerging Markets HALO strategy has $4.2B in AUM.
Team	Advantageous	• The Emerging Markets HALO team is led by Head of Emerging Markets & Asia-Pac Equities, Geoffrey Wong. Mr. Wong has been with the firm since 1997 and has been lead PM of the product since its inception in September 2008. • Mr. Wong is supported by four co-PMs. The PMs are supported by sixteen EM research analysts, who also support other UBS investment teams.
Investment Philosophy	Advantageous	• The UBS HALO team believes markets are inefficient due to investor behavioral biases. They believe markets over-react to short-term factors and under-react to long-term structural changes. They believe that concentrated, high conviction portfolios, predicated on their long-term intrinsic value methodology, can outperform over time.
Investment Process	Advantageous	• The investment process begins with research conducted by UBS' EM equity analysts. Analysts are assigned by industry and generally cover 20 to 40 stocks. Their research is primarily focused on quality and valuation. • Analysts score companies based on a proprietary checklist framework. The checklist is used to score a company's industry structure, competitive position, growth trends and sustainability, and ESG risks. Each question has a score which rolls up into an overall rank. Lastly, analysts estimate the company's intrinsic value using UBS' Global Equity Valuation System, which is a cash-flow-based valuation model. • Portfolio decisions by the Emerging Markets Strategy Committee, which is chaired by Geoffrey Wong. Portfolios are concentrated and generally hold 25-35 stocks. Country and sector exposures are constrained versus the index.
Performance	Highly Advantageous	• Inception Date: 9/2008. Performance has been strong and consistent since inception. The strategy has outperformed over the trailing one-, three-, and five-year and since inception periods by 6.3%, 5.1%, 3.0%, and 4.5%, net of fees.
Fees	Advantageous	• Commingled Fund: Effective fee of 0.88% on all assets. Ranks in second quartile of respondents.

Victory Capital (Sophus)

Rating Criteria	Rating	Rationale
Overall	Advantageous	
Organization	Advantageous	• Victory Capital (NASDAQ: VCTR) is a large, publicly traded asset management firm. The firm was founded in 1912 and is based in Brooklyn, Ohio. The firm executes a multi-boutique business model. The Sophus team joined Victory Capital through Victory's acquisition of RS Investments in 2016. • Victory manages approximately $61B in AUM across equity, fixed income, multi-asset and alternative investment products. The Sophus Emerging Markets strategy has $864m in AUM.
Team	Advantageous	• The Sophus investment team is based in Des Moines, IA. The team is led by CIO Michael Reynal. Previously, Mr. Reynal was the lead PM of the Principal Global Emerging Markets strategy, where he managed the product along with other members of the Sophus investment team using a similar philosophy and process, from January 2001 to November 2012. During his tenure on the Principal EM product, Mr. Reynal outperformed the MSCI EM index by 0.5%, net of fees. Mr. Reynal's team was lifted out by RS Investments in 2012. • In addition to Mr. Reynal, the Sophus investment team consists of four PMs and six research analysts.
Investment Philosophy	Advantageous	• Sophus believes that the market rewards earnings growth with higher stock prices most of the time. Thus, the Sophus investment approach is centered on identify stocks with positive earnings revisions and earnings growth that is not yet fully reflected in valuations. Additionally, they believe that the combination of quantitative investment tools and fundamental research allows for a sustainable and repeatable investment process, and source of excess returns, over time.
Investment Process	Advantageous	• The investment process begins with the Sophus Emerging Markets Alpha model, which is a multi-factor quantitative model that scores and ranks stocks within the emerging markets investment universe. The model ranks stocks using an ordinal 1 to 100 ranking based on earnings growth, relative valuations, earnings revisions, and the potential for future positive earnings surprises. • Investment team members have sector coverage. Based on the model's output, analysts perform fundamental research on attractive ranked stocks (those that rank in the top quintile). Fundamental research consists of balance sheet, income statement, and industry analysis. Qualitative insights from meetings with company management and industry contracts are also incorporate in their analysis. • Portfolios are diversified across 100 to 130 stocks. Portfolio construction is guided by tight benchmark-relative risk controls.
Performance	Advantageous	• Inception Date: 4/2013. Sophus' performance has been good and consistent since inception. The strategy has outperformed over the trailing one-, three-, and five-year and since inception periods by 4.9%, 3.3%, 1.9%, and 1.9%, net of fees. However, analysis of the team's EM track record at their prior firm, Principal Global, where they executed on a similar investment philosophy and process, shows only modest outperformance over a long-term time period.
Fees	Advantageous	• Commingled Fund: Effective fee of 0.79% on all assets. Ranks in second quartile of respondents.

Wellington Management

Rating Criteria	Rating	Rationale
Overall	Not Advantageous	
Organization	Advantageous	• Wellington Management Company is a global asset management firm headquartered in Boston, MA. The firm was founded in 1928 and is 100% employee owned by more than 160 partners. • Wellington has almost $1 trillion in total assets under management across a broad range of equity, fixed income, and alternatives products. The Emerging Markets Research Equity product has $921m in AUM.
Team	Not Advantageous	• The portfolio is managed by a sub-set of Wellington's centralized Global Industry Analysts. Devashish Chopra is co-team lead and is responsible for monitoring overall portfolio risk. Analysts who contribute to this strategy are based in Boston, Radnor, PA, London, Singapore, and Hong Kong.
Investment Philosophy	Not Advantageous	• Wellington believes companies in the same industry can perform differently over time and that bottom-up research can anticipate fundamental change and identify pricing anomalies. • As such, they believe that by exploiting intra-sector dispersion and applying the diverse investment frameworks of each analyst they can achieve attractive excess returns.
Investment Process	Not Advantageous	• The strategy utilizes a fundamental, bottom-up approach. The portfolio consists of multiple sub-portfolios, each actively managed by Wellington's Global Industry Analysts. • The allocation of assets to each sub-portfolio corresponds to the relative weight of the analyst's sector coverage within the index. Each analyst applies their respective investment framework to their sub-portfolio. • The portfolio typically holds more than 80 stocks, with active weights tightly controlled versus the benchmark.
Performance	Advantageous	• Inception Date: 4/2010. This product's performance has been strong since inception, but the track record is relatively short when compared to other respondents with strong performance of similar time periods. The strategy has outperformed the index over the trailing one-, three-, and five-year and since inception periods by 7.2%, 5.8%, 4.6%, and 2.5%, net of fees.
Fees	Highly Advantageous	• Commingled Fund: Effective fee of 0.75% on all assets. Ranks in first quartile of respondents.

Wells Fargo Capital Management (Berkeley Street Emerging Markets Equity)

Rating Criteria	Rating	Rationale
Overall	Not Advantageous	
Organization	Advantageous	• Wells Capital Management is based in San Francisco, CA and is a wholly owned subsidiary of Wells Fargo & Company (NYSE: WFC), a large publically traded bank. • Wells Capital manages $378 billion in assets, with $9.4 billion in the Berkeley Street Emerging Markets Equity strategy.
Team	Advantageous	• The Berkeley Street Emerging Markets Equity team is led by Jerry Zhang, Senior Portfolio Manager. He is supported by two co-portfolio managers, Derrick Irwin and Richard Peck.
Investment Philosophy	Advantageous	• Wells seeks to invest in quality companies below their intrinsic value. They define quality companies as those that are able to sustain high profitability over a long period of time. Companies they look for typically have a superior competitive position, financial strength and profitability, favorable growth prospects, and strong management.
Investment Process	Advantageous	• The strategy is built on fundamental, bottom-up analysis. The process has two elements applied sequentially- Quality and Valuation. The team initially screens the universe for a defined list of quality criteria. The output of the screen is a "Quality Pool" of stocks, which are then subjected to fundamental analysis and valuation. • From there, the team will conduct a fundamental appraisal of the business to estimate its intrinsic value. The team will use varying valuation techniques depending on the type of business. • Stocks trading at a discount to intrinsic value are eligible for portfolio inclusion. Portfolios typically hold 90-120 stocks.
Performance	Not Advantageous	• Inception Date: 10/1997. While the Berkeley Street EM Equity strategy has modestly outperformed over longer trailing periods, performance has been weak more recently. The strategy has outperformed by 1.5%, 1.1%, and 1.6% over the trailing three- and ten-year and since inception periods. However, over the trailing one- and five-year periods, Wells has underperformed by -3.6% and -0.0%.
Fees	Not Advantageous	• Separate Account: Effective fee of 1.15% on all assets. Ranks in forth quartile of respondents.

Wells Fargo Capital Management (SF Global Emerging Markets Equity Income)

Rating Criteria	Rating	Rationale
Overall	Not Advantageous	
Organization	Advantageous	• Wells Capital Management is based in San Francisco, CA and is a wholly owned subsidiary of Wells Fargo & Company (NYSE: WFC), a large publically traded bank. • Wells Capital manages $378 billion in assets, with $1.7 billion in the SF Global Emerging Markets Equity Income product.
Team	Advantageous	• The investment team consists of two PMs and six analysts. PM Anthony Cragg leads the investment team and is the final decision-maker on the portfolio. Mr. Cragg has been with the firm since 1993 and has managed the product since inception.
Investment Philosophy	Advantageous	• The SF Global Emerging Markets Equity Team believes that fundamental research and bottom-up stock selection, combined with top-down macroeconomic and sector analysis, is key to outperforming in emerging markets. Further, they believe that sector and country rotation offers the potential to enhance returns due to the variability on cross-country growth prospects in EM.
Investment Process	Advantageous	• The investment process starts by screening the investable universe for companies with a yield exceeding that of the index. From there, the list of stocks is further reduced by the elimination of stocks with less than $200m market cap. • Attractive investment candidates are researched by the team using a traditional, fundamental research process. Stocks are rated 1 to 5 (best to worst) by the analysts. PMs formulate country and sector views, which guides the portfolio construction process. • Portfolios hold 80 to 120 stocks. While PMs will make country/sector bets, these exposures are limited via loose benchmark-relative risk controls. All holdings in the portfolio must pay a dividend yield greater than the index.
Performance	Advantageous	• Inception Date: 1/2008. Performance has been mixed since inception. The strategy performed strongly during the 2008/2009 Global Financial Crisis due to its defensive, yield-oriented positioning. However, performance has been weak more recently. The strategy has underperformed over the trailing one-, three-, and five-year periods by -7.9%, -1.6%, and -0.0%, net of fees.
Fees	Not Advantageous	• Separate Account: Effective fee of 1.15% on all assets. Ranks in forth quartile of respondents.

Westwood Global Investors

Rating Criteria	Rating	Rationale
Overall	Advantageous	
Organization	Highly Advantageous	• Westwood Global Investors (WGI) was founded in 2003 by Meg Reynolds and Bryan Ward, who had worked together previously in the early stages of their careers at Putnam Investments. The firm is based in Boston and is 100% employee-owned. • WGI manages $12B in AUM across 4 investment products. The firm's flagship product is Global Emerging Markets, which is closed to new investors. Emerging Markets Smaller Companies has $737m in AUM and was incepted in 2012.
Team	Advantageous	• The investment team consists of two PMs (Bryan Ward and Meg Reynolds) and six research analysts. • Historically, the analyst team has experienced modest turnover. Five analysts have left the firm since December 2012.
Investment Philosophy	Advantageous	• WGI believes that bottom-up stock selection focused on companies with strong free-cash-flow and high quality management teams supports positive investment outcomes over time. They believe in the merits of concentrated, high conviction portfolios and a long-term investment horizon.
Investment Process	Advantageous	• WGI's investment process is purely bottom-up. As opposed to the traditional market cap guidelines used by other small cap managers, WGI screens the universe for stocks that trade at or below $10m in daily trading volume. Thus, liquidity, and not market cap, defines WGI's investment universe. This criteria, however, makes benchmarking the strategy somewhat difficult. • From there, the investment team analyzes companies using a traditional approach to fundamental research. The team makes site visits and meets with management teams to qualitatively assess the quality of the business. Additionally, the team will perform financial statement analysis and analyze the company's historical cash flows. • Portfolios are concentrated in 25 to 35 high conviction stocks. The PMs use a 3-5 year investment horizon and low portfolio turnover.
Performance	Not Advantageous	• Inception Date: 1/2012. Performance has been mixed since inception. The strategy has underperformed the MSCI EM Small Cap index over the trailing one-year and since inception periods by -0.2% and -0.2%, net of fees. WGI has outperformed over the three- and five-year period by 5.4% and 1.2%, net of fees.
Fees	Not Advantageous	• Commingled Fund: Effective fee of 1.20% on all assets. Ranks in fourth quartile of respondents.

William Blair Investment Management

Rating Criteria	Rating	Rationale
Overall	Advantageous	
Organization	Advantageous	• William Blair Investment Management is a large financial services firm based in Chicago, IL. The firm was founded in 1935 and is currently 100% employee owned by 191 employee partners. • William Blair manages $64 billion across various fixed income, equity, and alternative investment products. The Emerging Markets Growth strategy is the firm's flagship EM product. The strategy has $6.2B in AUM.
Team	Advantageous	• William Blair's emerging markets investment team is experienced investment team and led by two co-portfolio managers. The co-portfolio managers are supported by a deep team of global sector analysts. • Both co-portfolio managers have been with the firm for over 18 years.
Investment Philosophy	Advantageous	• William Blair believes companies with high quality and sustainable growth characteristics tend to perform well in up markets, protect in down markets and thus, produce attractive risk adjusted returns. • As such, William Blair looks for companies that show organic value creation, peer group leadership, consistent earnings growth, high return on capital and assets, low leverage and positive earnings trends over time.
Investment Process	Advantageous	• William Blair uses a blend of quantitative models and qualitative research to define a "quality growth" universe. The output results in approximately 700-1,400 stocks, approximately 800 of which are emerging markets stocks. • In addition to continuous portfolio research, a weekly focus list of approximately 25-50 new stocks is produced for business model assessment, management analysis, and in-depth financial reviews. • Investment ideas are presented to the team and vetted before inclusion in the portfolio. The portfolio holds 100 to 130 stocks. The portfolio is distinctly all-cap, with significant exposure to small and mid-cap stocks.
Performance	Advantageous	• Inception Date: 10/1999. William Blair has a strong long-term track record in the EM space. While the strategy's more recent returns have been somewhat mixed, the results over longer time periods remain attractive. The strategy has outperformed by 7.5%. 1.5%, 0.6% and 2.8% over the trailing one-, five- and ten-year and since inception periods, net of fees, respectively. However, WB has underperformed over the most recent three-year period by -0.5%.
Fees	Not Advantageous	• Collective Investment Trust: Effective fee of 1.03% on all assets. Ranks in fourth quartile of respondents.

Manager Trailing Performance (Net of Fees)[1]
As of March 31, 2018

Manager	Inception Date	1 Year Excess Returns (%)	3 Year Excess Return (%)	5 Year Excess Return (%)	10 Year Excess Return (%)	Since Inception Excess Return
Driehaus Capital Management	1/1997	7.5	2.4	2.2	2.5	6.2
GQG Partners	1/1997[2]	2.2	1.8	1.3	4.1	3.5
LMCG	1/2008	-0.4	-2.3	-1.8	1.3	1.4
ABS Investment Management	11/2017	NA	NA	NA	NA	0.4
Aberdeen Standard Investments	1/1996	-9.7	-2.2	-2.4	3.2	3.2
Acadian	3/2011	-6.7	-3.5	-0.4	NA	3.0
AllianceBernstein	7/2012	-6.3	0.5	2.9	NA	2.9
American Century Investments	11/1997	9.1	3.9	3.5	0.8	1.6
Artisan Partners	1/2010[3]	-3.6	1.4	1.6	NA	4.6
Ashmore Investment Management	10/2011	7.0	6.6	3.4	NA	2.6
Axiom Investors	8/2007	4.6	-0.4	0.8	2.3	2.5
Baillie Gifford	10/1994	8.0	3.4	3.9	1.6	3.8
BNY Mellon AMNA	8/2005	5.3	2.0	0.4	0.5	1.2
Calamos Advisors	12/2008	3.0	-1.8	0.4	NA	-0.4
Columbia Threadneedle	7/2011	8.3	4.4	3.2	NA	3.9
Copper Rock Capital Partners[4]	10/2012	5.0	2.5	1.2	NA	2.5
Dimensional Fund Advisors	5/2005	-2.9	0.4	0.3	1.4	0.6
		1 Year Return (%)	**3 Year Return (%)**	**5 Year Return (%)**	**10 Year Return (%)**	
MSCI Emerging Markets	*1/1/1988*	*24.9*	*8.8*	*5.0*	*3.0*	

1 All risk statistics calculated since inception of individual portfolios as of March 31, 2017.
2 Performance prior to June 2016 is from the Vontobel Emerging Markets strategy. Rajiv Jain managed the Vontobel Emerging Markets strategy from January 1997 to May 2016.
3 Artisan's performance includes the performance for the Thornburg Developing World strategy, which was founded and managed by Lewis Kaufman from January 2010 to February 2015. MSCI Emerging Markets Index returns are used as a return proxy during the interim period from March 2015 through June 2015 when Mr. Kaufman was transitioning to Artisan Partners
4 The benchmark for Copper Rock Emerging Markets Small Cap is the MSCI Emerging Markets Small Cap index.

Manager Trailing Performance (Net of Fees)[1]
As of March 31, 2018

Manager	Inception Date	1 Year Excess Returns (%)	3 Year Excess Return (%)	5 Year Excess Return (%)	10 Year Excess Return (%)	Since Inception Excess Return
Fiera Capital Management	2/2012	1.7	1.6	1.6	NA	1.9
Fisher Asset Management	4/2006	-1.9	-1.2	1.7	1.2	1.3
GAM Holding AG	4/2012	8.0	4.5	3.6	NA	3.9
Goldman Sachs Asset Management	4/1995	5.8	3.9	3.9	1.3	0.6
J O Hambro Capital Management	7/2011	-4.3	-1.4	1.7	NA	0.7
JP Morgan Asset Management	12/1997	5.6	4.8	3.5	5.0	3.5
Lazard	7/1994	-7.1	-0.2	-1.2	0.5	1.3
LGM Investments	10/2007	-8.1	-1.5	-1.1	1.2	0.9
Macquarie	10/2005	-1.1	4.0	1.8	1.0	1.7
Manulife	12/2010	4.3	-0.0	1.7	NA	1.0
Marathon	3/2013	-1.3	1.8	0.4	NA	0.7
Martin Currie	1/2003	8.1	3.7	0.7	-0.4	-0.2
Mountain Pacific	10/2012	-3.1	-0.3	-1.1	NA	-0.8
Newton	6/2011	-1.8	0.4	3.1	NA	3.5
Oaktree	7/2011	-0.1	-0.0	-1.2	NA	0.1
Principal Global Investors	1/2014	3.4	2.9	NA	NA	2.2
Manager		**1 Year Returns (%)**	**3 Year Return (%)**	**5 Year Return (%)**	**10 Year Return (%)**	
MSCI Emerging Markets	*1/1/1988*	*24.9*	*8.8*	*5.0*	*3.0*	

[1] All risk statistics calculated since inception of individual portfolios as of March 31, 2017.

Manager Trailing Performance (Net of Fees)[1]
As of March 31, 2018

Manager	Inception Date	1 Year Excess Returns (%)	3 Year Excess Return (%)	5 Year Excess Return (%)	10 Year Excess Return (%)	Since Inception Excess Return
Putnam	8/1997	8.6	3.2	2.9	0.3	0.8
Quantitative Management Associates	5/2009	-0.0	-0.4	0.1	NA	1.7
RBC	4/2010	-4.4	-1.2	1.2	NA	1.8
Schroder	1/1992	3.3	1.9	1.0	0.6	0.9
State Street Global Advisors	7/2007	0.9	1.2	0.9	0.8	0.7
TOBAM SAS	7/2011	2.5	-3.3	-1.1	NA	0.3
Trilogy Global (Emerging Markets Equity)	4/1997	1.9	1.4	-0.1	-1.3	2.1
Trilogy Global (Emerging Wealth Equity)	4/2011	3.9	2.8	2.6	NA	2.7
UBS	9/2008	6.3	5.1	3.0	NA	4.5
Victory Capital (Sophus)	4/2013	4.9	3.3	1.9	NA	1.9
Wellington	4/2010	7.2	5.8	4.6	NA	2.5
Wells Capital (Berkeley Street Emerging Markets Equity)	10/1997	-3.6	1.5	-0.0	1.1	1.6
Wells Capital (SF Global Emerging Markets Equity Income)	1/2008	-7.9	-1.6	-0.0	3.9	4.4
Westwood Global Investors[2]	1/2012	-2.3	3.9	0.8	NA	1.1
William Blair	10/1999	7.5	-0.5	1.5	0.6	2.8
Manager		**1 Year Returns (%)**	**3 Year Return (%)**	**5 Year Return (%)**	**10 Year Return (%)**	
MSCI Emerging Markets	*1/1/1988*	*24.9*	*8.8*	*5.0*	*3.0*	

1 All risk statistics calculated since inception of individual portfolios as of March 31, 2017.
2 The benchmark for WGI Emerging Markets Smaller Companies is the MSCI Emerging Markets Small Cap index.

Proposed Fees

Manager	Vehicle Type	Estimated Effective Fee (%)[1]	Rank (Quartile)
Driehaus Capital Management	CIT	0.65%	1
GQG Partners	CIT	0.73%	1
LMCG	CIT	0.75%	1
ABS Investment Management	CF	0.80%	2
Acadian Asset Management	CF	0.80%	2
AllianceBernstein	CF	0.95%	3
American Century Investments	CIT	0.90%	2
Artisan Partners	CIT	1.05%	4
Ashmore Investment Management	MF	1.02%	4
Axiom Investors	CIT	1.07%	4
Baillie Gifford	MF	0.87%	2
BNY Mellon AMNA	CF	0.66%	1
Calamos Advisors	CF	0.53%	1
Columbia Threadneedle	CIT	0.71%	1
Copper Rock Capital Partners	CF	1.00%	3
Dimensional Fund Advisors	MF	0.53%	1
Fiera Capital Management	CF	0.65%	1
Fisher Asset Management	CIT	1.05%	4
GAM Holding AG	CF	0.80%	2
Goldman Sachs Asset Management	SA	1.00%	3
J O Hambro Capital Management	MF	1.29%	4
JP Morgan Asset Management	CIT	0.95%	3
Lazard Asset Management	MF	1.09%	4

[1] Assumes a mandate size of $50 million. In certain cases operating expenses for commingled fund/collective investment trust vehicles were unspecified. Operating expenses for separate accounts are subject to price proposals from the custodian bank. In instances operating expenses were left unspecified, and in the case of separate account mandates, we assume 0.15% of operating expenses to arrive at an estimated effective fee. Additionally, in certain cases performance fee arraignments have been proposed. In these instances, we've arrived at estimated effective fees by analyzing the manager's historical returns. Using the calculation periods proposed and the manager's historical returns, we then build a probability density function around excess returns within the stated calculation period to arrive at a probability-weighted estimated effective fee for the manager. This methodology allows for a more accurate comparison of "all-in" fees across the various types of price proposals.

Proposed Fees

Manager	Vehicle Type	Estimated Effective Fee (%)[1]	Rank (Quartile)
Macquarie Investment Management	MF	1.32%	4
Manulife Asset Management	CF	0.88%	2
Marathon Asset Management	CF	1.24%	4
Martin Currie	MF	0.85%	2
Mountain Pacific Group	CF	1.00%	3
Newton Investment Management	CIT	0.48%	1
Oaktree Capital Management	CF	0.95%	3
Principal Global Investors	SA	1.01%	4
Putnam Investments	CF	0.60%	1
Quantitative Management Associates	CIT	0.74%	1
RBC Global Asset Management	CF	0.90%	2
Schroder Investment Management	CF	1.07%	4
Standard Life Aberdeen	CF	0.95%	3
State Street Global Advisors	CF	0.33%	1
TOBAM SAS	CF	0.95%	3
Trilogy Global Advisors	CF (UCITs)	0.80%	2
Trilogy Global Advisors	CF (UCITs)	0.80%	2
UBS Asset Management	CF	0.88%	2
Victory Capital	CF	0.79%	2
Wellington Management	CF	0.75%	1
Wells Fargo (Berkeley Street EM)	SA	1.15%	4
Wells Fargo (SF GEM Income)	SA	1.15%	4
Westwood Global Investors	CF	1.20%	4
William Blair Investment Management	CIT	1.03%	4

[1] Assumes a mandate size of $50 million. In certain cases operating expenses for commingled fund/collective investment trust vehicles were unspecified. Operating expenses for separate accounts are subject to price proposals from the custodian bank. In instances operating expenses were left unspecified, and in the case of separate account mandates, we assume 0.15% of operating expenses to arrive at an estimated effective fee. Additionally, in certain cases performance fee arraignments have been proposed. In these instances, we've arrived at estimated effective fees by analyzing the manager's historical returns. Using the calculation periods proposed and the manager's historical returns, we then build a probability density function around excess returns within the stated calculation period to arrive at a probability-weighted estimated effective fee for the manager. The aforementioned allows for a better comparison of "all-in" fees across the various types of price proposals.

Summary

- Forty-nine managers submitted responses to this search.
- Based upon our review and evaluation of each respondent, Meketa Investment Group has ranked three managers as "Highly Advantageous," twenty-three ranked "Advantageous," and twenty-two ranked "Not Advantageous."
  - Two managers were rated as "Unacceptable," as they did not meet the minimum criteria for this search.

Disclaimer, Glossary, and Notes

Disclaimer

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INFORMATION USED TO PREPARE THIS REPORT WAS OBTAINED FROM INVESTMENT MANAGERS, CUSTODIANS, AND OTHER EXTERNAL SOURCES. WHILE WE HAVE EXERCISED REASONABLE CARE IN PREPARING THIS REPORT, WE CANNOT GUARANTEE THE ACCURACY OF ALL SOURCE INFORMATION CONTAINED HEREIN.

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PERFORMANCE DATA CONTAINED HEREIN REPRESENT PAST PERFORMANCE. PAST PERFORMANCE IS NO GUARANTEE OF FUTURE RESULTS.

Credit Risk: Refers to the risk that the issuer of a fixed income security may default (i.e., the issuer will be unable to make timely principal and/or interest payments on the security.)

Duration: Measure of the sensitivity of the price of a bond to a change in its yield to maturity. Duration summarizes, in a single number, the characteristics that cause bond prices to change in response to a change in interest rates. For example, the price of a bond with a duration of three years will rise by approximately 3% for each 1% decrease in its yield to maturity. Conversely, the price will decrease 3% for each 1% increase in the bond's yield. Price changes for two different bonds can be compared using duration. A bond with a duration of six years will exhibit twice the percentage price change of a bond with a three-year duration. The actual calculation of a bond's duration is somewhat complicated, but the idea behind the calculation is straightforward. The first step is to measure the time interval until receipt for each cash flow (coupon and principal payments) from a bond. The second step is to compute a weighted average of these time intervals. Each time interval is measured by the present value of that cash flow. This weighted average is the duration of the bond measured in years.

Information Ratio: This statistic is a measure of the consistency of a portfolio's performance relative to a benchmark. It is calculated by subtracting the benchmark return from the portfolio return (excess return), and dividing the resulting excess return by the standard deviation (volatility) of this excess return. A positive information ratio indicates outperformance versus the benchmark, and the higher the information ratio, the more consistent the outperformance.

Jensen's Alpha: A measure of the average return of a portfolio or investment in excess of what is predicted by its beta or "market" risk. Portfolio Return- [Risk Free Rate+Beta*(market return-Risk Free Rate)].

Market Capitalization: For a firm, market capitalization is the total market value of outstanding common stock. For a portfolio, market capitalization is the sum of the capitalization of each company weighted by the ratio of holdings in that company to total portfolio holdings; thus it is a weighted-average capitalization. Meketa Investment Group considers the largest 65% of the broad domestic equity market as large capitalization, the next 25% of the market as medium capitalization, and the smallest 10% of stocks as small capitalization.

Market Weighted: Stocks in many indices are weighted based on the total market capitalization of the issue. Thus, the individual returns of higher market-capitalization issues will more heavily influence an index's return than the returns of the smaller market-capitalization issues in the index.

Maturity: The date on which a loan, bond, mortgage, or other debt/security becomes due and is to be paid off.

Prepayment Risk: The risk that prepayments will increase (homeowners will prepay all or part of their mortgage) when mortgage interest rates decline; hence, investors' monies will be returned to them in a lower interest rate environment. Also, the risk that prepayments will slow down when mortgage interest rates rise; hence, investors will not have as much money as previously anticipated in a higher interest rate environment. A prepayment is any payment in excess of the scheduled mortgage payment.

Price-Book Value (P/B) Ratio: The current market price of a stock divided by its book value per share. Meketa Investment Group calculates P/B as the current price divided by Compustat's quarterly common equity. Common equity includes common stock, capital surplus, retained earnings, and treasury stock adjusted for both common and nonredeemable preferred stock. Similar to high P/E stocks, stocks with high P/B's tend to be riskier investments.

Price-Earnings (P/E) Ratio: A stock's market price divided by its current or estimated future earnings. Lower P/E ratios often characterize stocks in low growth or mature industries, stocks in groups that have fallen out of favor, or stocks of established blue chip companies with long records of stable earnings and regular dividends. Sometimes a company that has good fundamentals may be viewed unfavorably by the market if it is an industry that is temporarily out of favor. Or a business may have experienced financial problems causing investors to be skeptical about is future. Either of these situations would result in lower relative P/E ratios. Some stocks exhibit above-average sales and earnings growth or expectations for above average growth. Consequently, investors are willing to pay more for these companies' earnings, which results in elevated P/E ratios. In other words, investors will pay more for shares of companies whose profits, in their opinion, are expected to increase faster than average. Because future events are in no way assured, high P/E stocks tend to be riskier and more volatile investments. Meketa Investment Group calculates P/E as the current price divided by the I/B/E/S consensus of twelve-month forecast earnings per share.

Quality Rating: The rank assigned a security by such rating services as Fitch, Moody's, and Standard & Poor's. The rating may be determined by such factors as (1) the likelihood of fulfillment of dividend, income, and principal payment of obligations; (2) the nature and provisions of the issue; and (3) the security's relative position in the event of liquidation of the company. Bonds assigned the top four grades (AAA, AA, A, BBB) are considered investment grade because they are eligible bank investments as determined by the controller of the currency.

Sharpe Ratio: A commonly used measure of risk-adjusted return. It is calculated by subtracting the risk free return (usually three-month Treasury bill) from the portfolio return and dividing the resulting excess return by the portfolio's total risk level (standard deviation). The result is a measure of return per unit of total risk taken. The higher the Sharpe ratio, the better the fund's historical risk adjusted performance.

Standard Deviation: A measure of the total risk of an asset or a portfolio. Standard deviation measures the dispersion of a set of numbers around a central point (e.g., the average return). If the standard deviation is small, the distribution is concentrated within a narrow range of values. For a normal distribution, about two thirds of the observations will fall within one standard deviation of the mean, and 95% of the observations will fall within two standard deviations of the mean.

STIF Account: Short-term investment fund at a custodian bank that invests in cash-equivalent instruments. It is generally used to safely invest the excess cash held by portfolio managers.

Style: The description of the type of approach and strategy utilized by an investment manager to manage funds. For example, the style for equities is determined by portfolio characteristics such as price-to-book value, price-to-earnings ratio, and dividend yield. Equity styles include growth, value, and core.

Yield to Maturity: The yield, or return, provided by a bond to its maturity date; determined by a mathematical process, usually requiring the use of a "basis book." For example, a 5% bond pays $5 a year interest on each $100 par value. To figure its current yield, divide $5 by $95—the market price of the bond—and you get 5.26%. Assume that the same bond is due to mature in five years. On the maturity date, the issuer is pledged to pay $100 for the bond that can be bought now for $95. In other words, the bond is selling at a discount of 5% below par value. To figure yield to maturity, a simple and approximate method is to divide 5% by the five years to maturity, which equals 1% pro rata yearly. Add that 1% to the 5.26% current yield, and the yield to maturity is roughly 6.26%.

$$\frac{5\%\text{ (discount)}}{5\text{ (yrs. to maturity)}} = \begin{array}{c}1\%\text{ pro rata, plus}\\ 5.26\%\text{ (current yield)}\end{array} = 6.26\%\text{ (yield to maturity)}$$

Sources: Investment Terminology, International Foundation of Employee Benefit Plans, 1999.
The Handbook of Fixed Income Securities, Fabozzi, Frank J., 1991.

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Throughout this report, numbers may not sum due to rounding.

Returns for periods greater than one year are annualized throughout this report.

Values shown are in millions of dollars, unless noted otherwise.