

Emerging Markets Equity Manager Search

Table of Contents

1. Background

2. Manager Research Process

3. Manager Candidates

- Artisan Partners
- Driehaus Capital Management
- GQG Partners
- TT International

4. Historical Performance, Portfolio Characteristics, and Management Fees

5. Comparative Manager Assessment

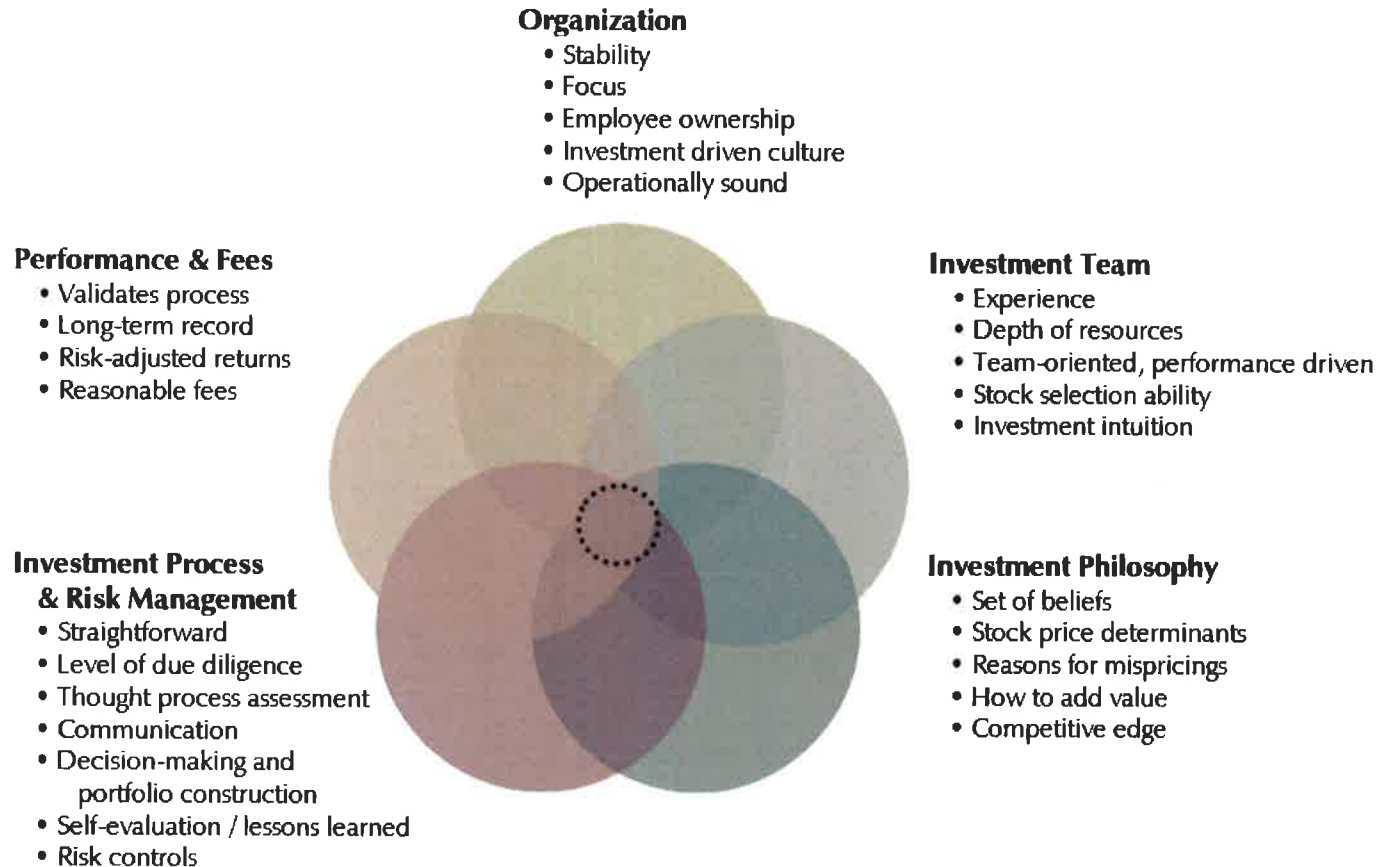
Background

- In December 2013 the Retirement System hired two emerging market equity managers.
- In May 2016 the portfolio manager of one of those strategies (Vontobel) left to start his own firm. In response to his departure, Meketa Investment Group recommended terminating the strategy.
- Since that time, the proceeds have been invested in an emerging market equity index.
- We recommend the Retirement System hires an actively managed strategy to be funded from the capital currently in the index fund.
- In total the Retirement System has a 12% target to emerging market equity. Current total exposure in the asset class is \$96 million (\$44.7 million in the Dimensional Emerging Markets Value strategy and \$51.3 million in the Northern Trust Emerging Markets Index).
- Today's search is for a \$50 million allocation to a growth oriented active emerging market equity strategy
- We recommend the Board of Trustees invite two finalists to present at a future board meeting.

Manager Due Diligence Process Introduction

- Selecting strong and appropriate investment managers is a key determinant of the overall success of the Fund. While they are expected to operate within a client's investment guidelines, investment managers are given a large degree of latitude to achieve the investment objectives.
- Manager selection is a nuanced process and requires extensive due diligence. When selecting prospective active managers, Meketa Investment Group evaluates the following areas:
 - Organization
 - Investment team
 - Investment philosophy
 - Investment process
 - Investment performance
 - Management fees
- In addition, all managers are evaluated within the context of the Fund's overall investment policy.

The Keys to Selecting Investment Managers



Manager Evaluation Criteria

Organization

- While there is no single “correct” way to organize an asset management effort, we believe that the ideal investment management organization possesses most of the following elements:
 - Focused on a single investment style or a focused team within a larger organization
 - Appropriately sized for the firm’s assets under management, with a reasonable growth plan and a willingness to close capacity-constrained strategies
 - Stable, investment driven, independent, and employee-owned (or majority employee-owned)
 - Performance driven with a team-oriented, supportive culture
 - Organized in such a way to ensure that information flows efficiently so that investment decisions can be made easily and, if necessary, quickly
 - Financially and operationally sound

Manager Evaluation Criteria (continued)

Investment Team

- Members of the investment team responsible for managing the strategy are evaluated in order to assess their competitive “edge” and to determine if they will be able to add value in the future. In a profession where intellectual capital is the greatest differentiator between managers, an investment strategy is only as good as the people behind it.
- During the course of our due diligence, we review the background of each member of the team. We want to know what motivated these individuals to work in asset management and, in particular, emerging markets equities, what experience they bring, and how long they have been in the industry.
- Specific qualities that we believe make a good investor are intelligence, inquisitiveness, analytical ability, and natural skepticism. A command of the details and an ability to assimilate lots of information, yet tie the information together and make a decision, are valued. Through the interview process, we seek to understand how a manager thinks about stocks, the global capital markets, broadly, and their portfolio.
- In this asset class, it is important that investment teams have sufficient resources allocated to evaluating the emerging markets both from the top-down and bottom-up. Capable managers will commit resources to both macroeconomic-oriented factors and bottom-up, fundamental research.
- Significant time is spent evaluating how the investment team interacts, their tenure together and their depth. Although some firms have been successful using the generalist model, we prefer specialization. Our belief is that there is value in having analysts with specific regional or sector expertise who have experience in markets through multiple cycles.
- Compensation structure and incentives are also analyzed. The investment team should be incented to place the interests of the client first and to maximize performance while assuming an appropriate level of risk.

Manager Evaluation Criteria (continued)

Investment Philosophy

- An investment philosophy is a set of beliefs about what factors drive changes in stock prices, what factors cause securities to be mispriced, and how security mispricing can be exploited through active management. A manager's investment philosophy also incorporates their beliefs about what their competitive edge is and how they distinguish themselves from their peers.
- We try to find managers who have a clear investment philosophy, and who can articulate how they are able to identify, and successfully execute on, exploitable investment opportunities, over the course of varying market cycles. Understanding where this philosophy comes from, how it has evolved over time, and how the manager identifies and selects attractive investments using their research process are very important. Some managers may not have formally thought about their philosophy, and are therefore not able to articulate what they believe. Their philosophy often becomes evident when they explain their investment process and discuss the stocks they own in their portfolio.
- Another element of a manager's philosophy is how they think about the benchmark they are evaluated against. Most managers we recommend are either benchmark-aware, but not *benchmark-constrained*, or believe in managing portfolios in a benchmark-agnostic manner. We are biased toward managers who have conviction in their ideas and reflect that conviction in the construction of their portfolios.

Manager Evaluation Criteria (continued)

Investment Process

- Every analysis of an investment manager must entail an examination of how they pick stocks for their portfolio, why they sell stocks from the portfolio, and how their portfolio is constructed. We like investment processes that are straightforward and easy to understand. Although we want to see consistency in the process, there is considerable art to investing. A repeatable process, in and of itself, does not guarantee good investment results. It is in the execution of the process where managers differentiate themselves and add value.
- In our analysis, we determine whether the portfolio is bottom-up driven, or if there is a significant top-down element to the process. Themes can also play a role in how portfolios are managed. In emerging markets, the use of various investment tools (e.g. valuation techniques, market-related data) can provide complementary sources of information in an investment process, and support a manager's edge.
- With this information as a backdrop, our analysis of the investment process initially focuses on how new ideas are generated and how these ideas find their way into the portfolio. Once the opportunity set has been identified, we seek to understand the quality of research a manager performs, and if that level of research is consistent with their stated investment approach and objective. Superior managers generally perform intensive due diligence and their level of understanding of the businesses in which they invest often gives them an edge. We want to make sure they know what they own in their portfolios.
- Once the research on an idea has been completed, an investment decision must be made. Ultimately, successful active management requires exercising good judgment. We always want to know how managers make investment decisions and who makes them. It is important to us that investment ideas are thoroughly vetted. We also want the decision-making process to be efficient and responsive to changing dynamics in the market. How managers construct their portfolios, and think about, as well as control, risk is also evaluated.

Manager Evaluation Criteria (continued)

Investment Performance

- Just because a manager has performed well in the past does not guarantee they will be able to continue to do so in the future. In fact, we recognize how difficult it is to sustain strong performance for a long period. We do feel that if we can find strong organizations with bright, motivated, knowledgeable, and experienced people, combined with a history of long-term, consistent success, we significantly increase the chances that managers we recommend to clients will add value in the future. If we are correct in our assessment of the quality of the organization and the people, then the performance should follow.
- Portfolio performance over multiple time horizons is evaluated. We review calendar-year results over as long a period as possible. We also examine rolling time periods to eliminate the impact of end point bias. We do not expect a manager to outperform the relevant index every year, but we do believe they should outperform over a full market cycle. What we are looking for is consistency. In addition, we analyze each manager's risk-adjusted returns. We want to make sure that our clients are being compensated for the risk the manager is taking. For each manager, we also look at the standard deviation, beta, tracking error, correlation with the benchmark, and other statistical measures. Our analysis of upside and downside capture gives us a sense of which managers can be expected to perform well in up- and down-markets. We have a bias toward equity managers who protect their clients on the downside because of the compounding effect of returns over time.
- We review the historical portfolio holdings of each manager to verify their investment style, to assess where their biases are, and *have been*, and to determine where and how they have been able to add value. This analysis tells us what helped and hurt the portfolio, and in which areas of the market a manager is particularly adept. We also look at the distribution of returns in the portfolio. Avoiding poor performing stocks, sectors, and/or countries, or minimizing their impact, is an important part of successfully managing an emerging markets equity portfolio.

Manager Evaluation Criteria (continued)

Management Fees

- The final step in our analysis is evaluating an investment manager's fees and the expenses they incur in managing the portfolio. Minimizing fees and expenses is important because these costs reduce the return to our clients. This effect can be very pronounced over time, so we seek to negotiate lower fees whenever possible.
- Trading costs are another hidden expense to investors and must also be evaluated. In general, portfolio managers with high turnover trading less liquid stocks will incur the highest trading costs.
- The emerging markets represent a diverse set of countries. Due to the onerous and time-consuming registration requirement in several emerging markets countries, Meketa Investment Group typically recommends clients invest in the asset class through fund vehicles (e.g. commingled funds, institutional mutual funds, etc.) rather than separate accounts. Some countries can take many months and, in extreme cases, up to a year for investors to complete the local registration processes. This can present a substantial opportunity cost for investors using active management in emerging markets. In addition to ease of use, fund vehicles can offer that added benefit of economies of scale in regards to fund operating expenses.

Overview

- Meketa Investment Group conducts research on emerging market equity investment managers on an ongoing basis. External research resources, such as eVestment Alliance, FactSet, and Morningstar, are used to screen the universe of emerging market equity strategies. Additionally, industry contacts are also utilized to identify new investment firms and strategies. Meketa research professionals also draw on their experience and knowledge from past meetings with investment managers.
- Meketa Investment Group continually monitors a wide range of emerging market equity strategies with frequent calls and/or onsite visits.

Manager Candidates

Manager Overview As of March 30, 2018

	Artisan	Driehaus	GQG	TT International
Firm Location	Milwaukee, WI	Chicago, IL	Fort Lauderdale, FL	London, U.K.
Firm Inception	1994	1982	2016	1988
Ownership Structure	Publicly Traded	100% Employee-Owned	95% Employee-Owned/ 5% Owned by Pacific Current Group	100% Employee-Owned
Strategy Name	Developing World	Emerging Markets Growth	Emerging Markets Equity	Emerging Markets Equity
Strategy Inception	July 2015	January 1997	June 2016	April 2011
Assets Under Management (Firm)	\$115 billion	\$9 billion	\$12 billion	\$7 billion
Assets Under Management (Strategy)	\$3 billion	\$3 billion	\$5 billion	\$3 billion

Artisan Overview

Organization

- 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. The eight investment teams are located at offices in Milwaukee, San Francisco, Atlanta, New York, Kansas City, and London.
- As of December 2017, Artisan Partners managed approximately \$115 billion in assets in 15 distinct investment strategies, with \$3 billion in the Developing World strategy.
- The Developing World Team manages a single investment product: Artisan Developing World. The strategy was inceptioned in July 2015. The Developing World Team previously managed the Thornburg Developing World strategy using the same investment approach.

Investment Team

- 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 investment philosophy and process. Prior to that, Mr. Kaufman was a senior analyst and co-PM of the Thornburg International Equity ADR product. Mr. Kaufman has 20 years of investment experience.
- Mr. Kaufman is supported by three dedicated research analysts, Michael Roberge, Edward Su, and David Ng. Previously, Mr. Roberge provided dedicated research support to Mr. Kaufman on the Thornburg Developing World strategy. Prior to joining the Artisan Developing World team, Mr. Su was a portfolio manager on the Thornburg Global Opportunities strategy, which actively invests in emerging markets equities. Mr. Ng is a junior analyst on the team who was hired in early 2017.

Artisan (continued)

Investment Philosophy

- The Artisan Developing World investment team believes that earnings growth and compounding business value drives long-term appreciation. The team seeks to invest in financially sound, free-cash flow generative companies with low financial leverage. They believe that companies with these qualities are less likely to impair capital during periods of extreme market volatility characteristic of emerging markets investing.
- Importantly, Artisan also believes that macroeconomic forces can have a significant impact on emerging markets investment returns. They believe emerging markets investments are uniquely exposed to a number of risk factors that leave these countries vulnerable to capital flight and, in turn, permanent capital impairment during periods of market stress. As such, Artisan seeks to enhance their stock selection process by mitigating the top-down risks inherent in emerging markets.
- The team also seeks to mitigate the volatility of the portfolio through the use of an expanded opportunity set. Artisan will invest in off-benchmark securities and developed market-listed companies with a significant proportion of their revenues/earnings growth coming from emerging markets.

Artisan (continued)**Investment Process**

- 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.) The team thoroughly reviews attractive businesses with a focus on the sustainability of free cash flow and the potential for fundamental disruption of a company's business model due to changing business conditions. 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. The team seeks to understand whether headwinds exist for future local currency performance across the emerging markets opportunity set, and manages individual country exposures accordingly. 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%.

Driehaus Overview

Organization

- Founded in 1982 by Richard Driehaus, Driehaus Capital Management is a privately held investment management firm based in Chicago, IL. The firm is majority-owned by Mr. Driehaus and his family trust. Current employees own the balance of the stock. The firm manages domestic, international, and emerging markets equity strategies, as well as alternative investment strategies. Each asset class is managed by an independent investment team. As of March 2018, the firm had \$9 billion in assets.
- The Driehaus Emerging Markets Growth Team manages three strategies (Emerging Markets Growth, Emerging Markets Small Cap Growth, and Frontier Markets) using the same investment philosophy and process. The team manages a total of \$3 billion in assets, with \$2.8 billion in the Emerging Markets Growth product.

Investment Team

- 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. Mr. Schwab became the lead portfolio manager of the Emerging Markets Growth strategy in January 2008. He is involved in all stages of the research process and makes all final decisions for the portfolio.
- Mr. Schwab is supported by co-portfolio managers Chad Cleaver and Richard Thies. Mr. Cleaver joined Driehaus in 2004 after earning his MBA at the University of North Carolina, Chapel Hill. Prior to that, he worked with the Board of Governors of the Federal Reserve System. Mr. Thies joined Driehaus in 2011. He worked at the World Bank and The Northern Trust as an economist before coming to Driehaus. 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.

Driehaus (continued)

Investment Philosophy

- Driehaus believes that, over the long term, sustainable revenue and earnings growth drive stock prices. Over the short term, however, they believe that analysis of macroeconomic, behavioral, and technical factors are necessary to identify *good growth companies* that are also *timely investments*.
- Driehaus invests in companies experiencing a positive trend change in its potential or expected earnings growth trajectory within four defined growth profiles. These are Dynamic Growth, Cyclical Growth, Recovery Growth, and Consistent Growth. The investment team waits until a stock exhibits positive momentum before investing in the company. Additionally, they believe in the importance of responding quickly to change, both positive and negative. The combination of long-term fundamental drivers and shorter-term market factors characterizes the Driehaus approach.

Driehaus (continued)

Investment Process

- Driehaus looks for stocks using an investment process that has three components: Objective Fundamental, Subjective Fundamental, and Security Timeliness. The Objective Fundamental stage begins with a series of bottom-up screens used to isolate potentially attractive investments. Screens are focused on identifying companies with positive inflections (i.e. second derivative change) in sales, earnings, and estimate revisions, in conjunction with quality, valuation, macroeconomic and technical factors.
- In the Subjective Fundamental stage, the team validates a company's business model, industry position, earnings quality, growth potential, balance sheet quality and valuation. The result of this analysis is an investment thesis predicated on a company's magnitude, acceleration, duration and/or sustainability of growth versus what is implied in current market prices.
- Lastly, Driehaus looks to buy good companies at the right time. In the Security Timeliness stage, the team will use stock-specific and industry group technical screens to evaluate stocks that are potentially the timeliest and being rewarded by the market.
- They believe macro and micro factors are intertwined in emerging markets; therefore, macro analysis is critical component of all stages of the process. The team evaluates the impact of changes in currency, interest rates, and policy dynamics which can influence company-specific fundamentals. Driehaus' top-down framework enables the PMs to express the team's macro views in portfolio construction as well.
- The strategy's focus on shorter-term market factors results in consistent exposure to medium-term momentum and higher than average portfolio turnover. Annual turnover is typically between 150% and 300%. However, the portfolio's exposure to momentum and use of portfolio turnover, within an inherently volatile asset class, has also resulted in lower than average absolute risk (i.e. standard deviation) and a lower than market beta (~0.88). Additionally, the strategy's high portfolio turnover is consistent with Driehaus' definition of risk and desire to avoid large absolute losses and drawdowns. The portfolio generally holds between 80 and 120 stocks.

GQG Overview

Organization

- 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.
- Though GQG Partners is a relatively new organization, the investment team is fully-staffed and the firm has successfully grown its total assets under management. GQG employs 43 individuals, 12 of whom comprise the investment team. 31 individuals are in non-investment roles. As of December 2017, the firm managed \$13 billion in assets across three products, with \$5 billion in the Emerging Markets Equity strategy.

Investment Team

- 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 27 years of investment experience. During his tenure at Vontobel, 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. Additionally, Mr. Jain served as CIO and Co-CEO at Vontobel Asset Management beginning in January 2002.
- Mr. Jain is supported by nine analysts and two traders. Though analysts are afforded autonomy in the company analysis process, Mr. Jain is involved throughout all stages of research. He considers himself to be an analyst first and portfolio manager second. Mr. Jain also incorporates skepticism into the research process by assigning an analyst to act as "devil's advocate" on every stock. By doing so, he promotes a more in-depth and challenging vetting of the investment idea. The analyst is forced to defend the company they are proposing to add to the portfolio.

GQG (continued)

Investment Philosophy

- GQG Partners believes that long-term, stable, and superior earnings growth drives investment returns and risk-adjusted outperformance.
- The GQG Partners team seeks to invest in businesses that are predictable (strong franchise, low capital intensity, shareholder-oriented management, etc.), sustainable (able to replicate or exceed past success in terms of growth, operating margins, ROE, ROA, etc.), 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.

GQG (continued)

Investment Process

- 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.
- Promising companies are then subject to intense fundamental research to assess the quality of the business and its 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.
- The team manages a relatively concentrated portfolio of approximately 50-80 positions. Annual portfolio turnover is typically between 30% and 70%.

TT International Overview

Organization

- TT International is boutique asset management firm based in London, U.K. The firm is 100% employee-owned and was founded by Tim Tacchi in 1988, with seed funding provided by George Soros to manage a European long/short equity strategy.
- Although the firm's origin is in hedge fund investing, TT has broadened out its product suite over the years to include equity long/short, long only equity, global macro, and event-driven strategies. TT has a long history of international investing; however, the firm's dedicated Global Emerging Markets Team was established more recently, in 2011. Today, the firm manages approximately \$7 billion in AUM, with \$3 billion in the Emerging Markets Equity strategy. The strategy is currently soft-closed to investors.

Investment Team

- The TT International Global Emerging Markets investment team is led by PM Niall Paul. Mr. Paul joined TT International with the task of building the firm's dedicated emerging markets equity business. Prior to joining the firm in 2010, Mr. Paul was CIO, Equities and Deputy CEO of Aviva Investors, where he oversaw funds managed across a broad range of asset classes and an investment team of 50 individuals.
- Mr. Paul is supported by a team of six dedicated investors, which consists of three co-PMs and three analysts. The investment team is located in TT's London and Singapore offices. All investment team members are involved in the research process. However, Mr. Paul has final decision-making authority on all portfolio investment decisions.

TT International (continued)**Investment Philosophy**

- TT International believes that emerging markets are a structurally inefficient asset class due to 1) an insufficient understanding of the inter-play between bottom-up and top-down factors in emerging markets, where poor domestic savings bases result in dependency on foreign flows of capital, 2) the under-researched nature of most emerging market companies, and 3) flawed index construction which creates investor behavioral biases. They believe these weaknesses in the asset class create exploitable investment opportunities.
- The team believes that they can add value by utilizing an unconstrained top-down and bottom-up investment approach. Top-down analysis enables the team to target more favorable countries and avoid less favorable ones. Additionally, given that many emerging markets countries are dependent on foreign capital, this top-down analysis provides a robust framework for actively managing currency exposures. These tools are then paired with thorough bottom-up research focused on companies with strong growth prospects, free cash flow generation, high quality balance sheets, and an observance of ESG issues.

Investment Process

- The TT Emerging Markets team seeks to outperform the MSCI Emerging Markets index by 3%, gross of fees, over rolling three-year periods. The investment process starts with a series of top-down and bottom-up screens, beginning with top-down.
- Their top-down screens score countries and sectors across six variables: liquidity and monetary policy, earnings revisions, currency outlook, relative valuation, politics/reform, and price momentum. The output of the screens provides an objective assessment of current economic and market conditions, which identify areas of focus for further research. From there, the team seeks to understand current market consensus and areas in which their views differ.
- TT then applies bottom-up investment screens within countries/sectors of focus. Stocks are scored across three key variables: price momentum, earnings revisions, and valuation. Individual stock selection is predicated on their proprietary V-V-C system: Valuation – Verification – Catalyst.
- Valuation analysis is primarily based on free cash flow analysis, but the team will use various valuation criteria depending on the sector/region. Their verification process is focused on meetings with company management, channel checks, and, when called for, discussions with industry expert networks. The aim is to uncover insights in terms of changing trends at the company-specific and/or industry level, which can be incorporated in their stock models. In an effort to avoid “dead money” and “value traps”, each stock must also possess identifiable catalysts that are expected to unlock value over the short/medium term. Specifically, they look for positive earnings surprises, a change in corporate/management strategy, an improvement in economic conditions, and the emergence of positive news flow.
- The end result is a portfolio of 50 to 60 stocks. Country and sector weights are limited to 50% of tracking error, with individual stock contribution to tracking error capped at 10%. TT will actively manage currency exposures via country allocation decisions and, at times, with currency hedges. Active currency decisions are limited to 10% of total portfolio risk. TT's use of catalysts and a short- to medium-term investment horizon results in relatively high portfolio turnover, which is typically between 100% and 200%.

Portfolio Characteristics As of March 31, 2018

	Artisan		Driehaus		GQG		TT Int'l		MSCI Emerging Markets	
Trailing Price-Earnings Ratio	20.7x		23.6x		17.6x		10.4x		13.9x	
Price-Book Value Ratio	7.1x		5.4x		3.3x		1.7x		1.7x	
Weighted Average Market Cap	\$94.5 billion		\$106.5 billion		\$124.3 billion		\$85.5 billion		\$102.0 billion	
Median Market Cap	\$14.2 billion		\$16.1 billion		\$27.7 billion		\$6.7 billion		\$6.8 billion	
Number of Holdings	50		96		57		57		846	
Annual Expected Turnover Rate	30-50%		150-300%		30-70%		100-200%		NA	
Market Cap Weightings:										
>\$50 billion	43%		38%		50%		28%		38%	
\$15-50 billion	16%		31%		43%		33%		35%	
\$1.5-15 billion	37%		29%		7%		32%		27%	
<\$1.5 billion	4%		0%		0%		6%		0%	
Top 3 Country Weightings:										
China	34%	China	21%	China	30%	China	25%	China	30%	
Other ¹	21%	Taiwan	11%	Russia	13%	Korea	14%	Korea	15%	
Brazil	9%	Brazil	9%	Other	13%	India	10%	Taiwan	12%	
Top 3 Sector Weightings:										
Info. Tech.	29%	Financials	30%	Financials	39%	Financials	32%	Info. Tech.	28%	
Cons. Disc.	22%	Info. Tech.	28%	Info. Tech.	32%	Info. Tech.	22%	Financials	24%	
Financials	22%	Cons. Disc.	13%	Cons. Staples	11%	Materials	17%	Cons. Disc.	9%	
% of Portfolio in Top 10 Holdings:										
37%		32%		42%		35%		25%		

- All four strategies manage relatively concentrated, benchmark-agnostic portfolios. Artisan, Driehaus, and GQG manage growth-oriented strategies, with portfolios that typically trade at a P/E and P/B premium relative to the index. While TT International also manages a growth-oriented strategy, its portfolio currently trades at a P/E discount with a P/B similar to that of the index, in part due to a large overweight position in the materials sector.

¹ "Other" represents companies that are listed in developed markets but obtain the majority of their revenues/earnings growth from emerging markets.

Portfolio Characteristics (continued)

As of March 31, 2018

- Artisan, GQG, and Driehaus will make off-benchmark investments in select developed market domiciled companies with the majority of their revenues/earnings growth derived from emerging markets. GQG's exposure to these types of businesses has historically been in Europe, while Artisan's exposures has been more concentrated in U.S. companies. Driehaus' off-benchmark exposure to the aforementioned areas has historically been lower when compared to Artisan and GQG; and, they will also invest in select frontier markets stocks. TT's off-benchmark positions have mainly been to frontier markets stocks.

Historical Risk (net of fees)¹
April 2011 – March 2018

	Artisan	Driehaus	GQG	TT International	MSCI Emerging Markets
Common Period Performance:					
Common Period Performance (%)	6.8	5.8	7.3	6.5	2.5
Best 3 Months (%)	17.6	13.1	13.9	18.4	16.6
Worst 3 Months (%)	-23.1	-18.4	-13.7	-24.0	-22.6
Risk Measures:					
Standard Deviation (%)	17.8	15.8	15.2	19.2	17.9
Tracking Error (%)	6.5	5.8	8.3	4.7	NA
Beta	0.89	0.82	0.73	1.00	1.00
Correlation to Benchmark	0.93	0.95	0.89	0.97	NA
Downside Deviation (%)	8.7	8.0	7.6	9.3	7.9
Upside Capture (%)	92	89	87	106	NA
Downside Capture (%)	78	79	72	89	NA
Risk-Adjusted Performance:					
Sharpe Ratio	0.4	0.4	0.5	0.3	0.1
Information Ratio	0.7	0.6	0.6	0.9	NA

- All four managers have outperformed the MSCI Emerging Markets index on both an absolute and risk-adjusted basis, net of fees, over the common period. All four managers have produced favorable upside/downside capture statistics and have outperformed in down markets, on average, over the common period.

¹ Net of fees returns assume the manager fee schedules stated herein. Common period is from April 2011 to March 2018. 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. 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.

Trailing and Calendar Year Performance (net of fees)¹
As of March 31, 2018

	Artisan	Driehaus	GQG	TT International	MSCI Emerging Markets
Trailing Period Returns (%):					
YTD	0.2	2.2	3.5	0.6	1.4
1 Year	21.3	32.4	27.1	30.3	24.9
3 Years	10.2	11.2	10.6	16.0	8.8
5 Years	6.6	7.2	6.3	9.5	5.0
7 Years	6.8	5.8	7.3	6.5	2.5
10 Years	NA	5.5	7.1	NA	3.0
Common Period	6.8	5.8	7.3	6.5	2.5
Calendar Year Returns (%):					
2017	35.5	44.1	34.2	45.2	37.3
2016	11.9	6.7	8.2	18.7	11.2
2015	-11.5	-9.6	-8.4	-10.6	-14.9
2014	-2.5	-5.1	6.2	-0.8	-2.2
2013	16.2	9.7	-5.4	7.1	-2.6
2012	23.4	20.6	21.3	18.8	18.2
2011	-15.1	-14.7	-2.4	NA	-18.4
2010	31.6	24.8	30.2	NA	18.9
2009	NA	72.0	54.6	NA	78.5
2008	NA	-53.9	-46.7	NA	-53.3

¹ Net of fees returns assume the manager fee schedules stated herein. Common period is from April 2011 to March 2018. 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. 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.

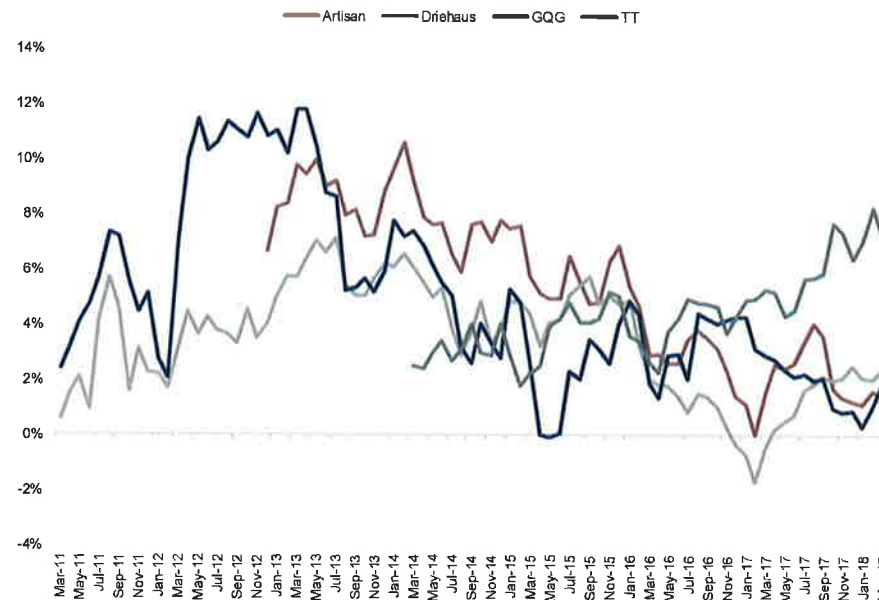
Monthly Excess Return Correlation¹
 Longest Common Period as of March 31, 2018

	Artisan	Driehaus	GQG	TT International
Correlation to DFA EM Value	-0.11	-0.24	-0.41	0.05

- All four managers have a complementary return profile relative to DFA EM Value.
- The lower the number the better. That means the strategy is expected to perform differently from the existing emerging market exposure of the Retirement System.
- Artisan, Driehaus, and GQG have a negative monthly excess return correlation with DFA. While TT's monthly excess return correlation is positive, it is extremely low, at 0.05.

¹ Net of fees returns assume the manager fee schedules stated herein. Common period is from April 2011 to March 2018. 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. 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.

Rolling Three-Year Period Excess Returns vs. MSCI Emerging Markets Index¹ (net of fees, as of March 2018)



As of 3/31/2018	Total Periods	Periods Outperformed	Percentage (%)	Average Ann. Excess Return (%)	Max (%)	Min (%)	Range (%)
Artisan	64	64	100	5.4	10.6	0.0	10.6
Driehaus	85	81	95	3.4	7.2	-1.7	8.9
GQG	85	84	99	5.0	11.8	-0.1	11.9
TT International	49	49	100	4.3	8.2	1.8	6.5

¹ Net of fees returns assume the manager fee schedules stated herein. Common period is from April 2011 to March 2018. 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. 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.

Management Fees

	Artisan Partners	Driehaus	GQG Partners	TT International
Vehicle Name	Developing World	Emerging Markets Growth	Emerging Markets Equity	Emerging Markets Equity
Investment Vehicle	Collective Investment Trust	Collective Investment Trust	Collective Investment Trust	Commingled Fund
Minimum Account Size	\$1 million	\$1 million	\$1 million	\$3 million
Liquidity	Daily	Daily	Daily	Monthly
Management Fee	1.05% on all assets	0.65% on all assets	0.65% on all assets	0.80% on all assets
All-In Fee ¹	1.05% on all assets	0.65% on all assets	0.73% on all assets	0.80% on all assets

- At 1.05% on all assets, Artisan's fees rank in the 76th percentile of the emerging markets equity peer group from a \$50 million commingled fund mandate.
- At 0.65% on all assets, Driehaus' fees rank in the 15th percentile of the peer group. Driehaus' standard collective investment trust fee is 1.00% on all assets, but the firm has offered Meketa clients a discounted fee schedule
- At 0.73% on all assets, GQG's fees rank in the 23rd percentile of the peer group. GQG's standard commingled fund fee is 0.80% on all assets, but the firm has offered Meketa clients a discounted fee schedule.
- At 0.80% on all assets, TT International's fees rank in the 32nd percentile of the peer group.
- The median fee for a \$50 million emerging markets equity commingled fund in the eVestment Emerging Markets Equity peer group is 0.90%.

¹ Assumes mandate size of \$50 million.

Summary Comparison

	Artisan	Driehaus	GQG	TT International
Firm Location	Milwaukee, WI	Chicago, IL	Fort Lauderdale, FL	London, U.K.
Firm Inception	1994	1982	2016	1988
PM Tenure at Firm	3 yrs	17 yrs	2 yrs	8 yrs
PM Industry Experience	20 yrs	17 yrs	27 yrs	19 yrs
AUM Firm	\$115 billion	\$9 billion	\$12 billion	\$7 billion
AUM Strategy	\$3 billion	\$3 billion	\$5 billion	\$3 billion
Correlation to DFA	Third Best	Second Best	Best	Least
Growth Characteristics	Second Most	Most	Third Most	Least
Fee	Most Expensive	Lowest	Second Lowest	Third Lowest
Performance	Second Highest	Lowest	Highest	Third Highest
Risk Adj. Performance	Second Best	Third Best	Highest	Lowest
Portfolio Concentration	Second Most	Least	Most Concentrated	Third Most
Annual Turnover	Lowest	Most	Second Lowest	Third Lowest
Upside Capture	92%	89%	87%	106%
Downside Capture	78%	79%	72%	89%

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.

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.

Tracking Error: This statistic measures the standard deviation of excess returns relative to a benchmark. Tracking error is calculated by multiplying the standard deviation of the monthly excess returns of a portfolio relative to a benchmark by the square root of twelve in order to annualize. The higher the tracking error, the greater the volatility of excess returns relative to a benchmark.

Sources: www.businessdictionary.com
www.liabilityinsurance.org
http://www.naplia.com/employeedishonesty/Employee_Dishonesty_FAQ.shtml
[Investment Terminology](#), International Foundation of Employee Benefit Plans, 1999.
[Modern Investment Management](#), Litterman, Bob, 2003.
[The Handbook of Fixed Income Securities](#), Fabozzi, Frank J., 1991.
[Investment Manager Analysis](#), Travers, Frank J., 2004