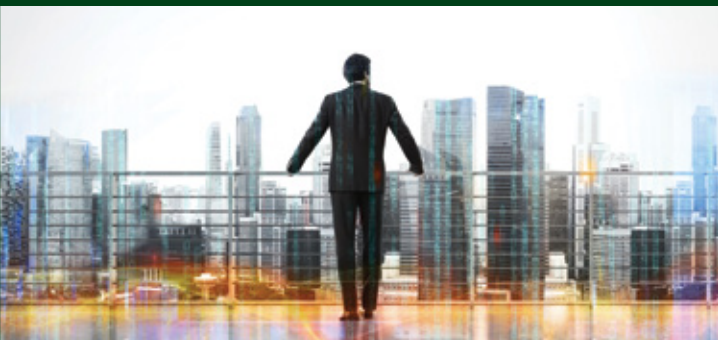


A world of investing.®



# PanAgora Asset Management



A culture of cutting-edge investment research.  
Combining quantitative methods with fundamental insights.  
Managing global investments since 1989.

Not FDIC insured | May lose value | No bank guarantee

# PanAgora Asset Management



“As a firm, we love conducting original, practical research and applying the insights to our client portfolios.”

— ERIC SORENSEN, Ph.D.

## **A premier provider of research-driven investment solutions**

PanAgora manages systematic strategies that combine cutting-edge quantitative techniques with fundamental insights of experienced investment professionals. Offerings include alternative, risk premia, and active strategies spanning all major asset classes and risk ranges. Founded in 1989 and headquartered in Boston, PanAgora serves global institutions, public and private retirement funds, sovereign wealth funds, endowments and foundations, and sub-advisory partners.

## **Quantitative methods designed to pursue fundamental insights**

PanAgora manages portfolios using sophisticated quantitative techniques that incorporate vast amounts of market information in order to capitalize on the firm’s fundamental research insights. Innovative research is a key ingredient in differentiating the firm’s results. The investment teams are committed to fully understanding the underlying factors that influence a security’s performance, including company operations, investor behavior, and macroeconomic signals.

## **A systematic approach to management**

PanAgora invests with the philosophy that capital markets are not perfectly efficient and instead offer attractive opportunities for investors who pursue disciplined, systematic strategies. The firm is a recognized leader in innovative portfolio construction techniques implemented throughout its strategies. A pioneer in risk budgeting, PanAgora has been implementing risk-managed strategies for over a decade, incorporating them across and within asset classes. The goal is to generate more attractive risk-adjusted returns on a persistent basis.

## **Blending creativity with innovative investment research**

Organized in Equity and Multi-Asset teams, PanAgora’s investment professionals think creatively to develop unique investment strategies and techniques. Team members hold 53 advanced academic degrees, including 13 Ph.D.s and one M.D., and most are engaged in original research, applying fundamental intuition to unlock investment opportunities. With diverse yet complementary backgrounds, team members collaborate to compound the value of research insights.



PANAGORA

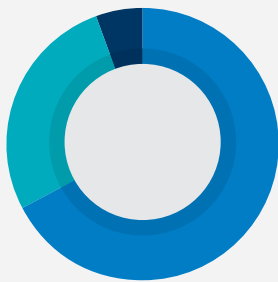
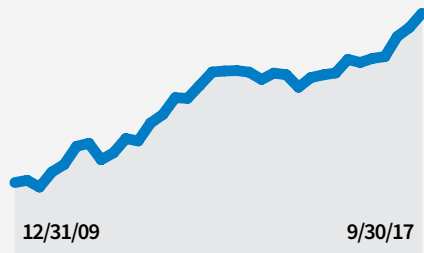
## PANAGORA AT A GLANCE

**28** YEARS SERVING INVESTORS

**150** INSTITUTIONAL CLIENTS GLOBALLY

**\$52** BILLION IN ASSETS UNDER MANAGEMENT as of September 30, 2017

**INCREASED \$36 BILLION** since December 31, 2009



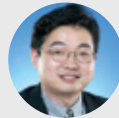
### DIVERSE INVESTMENT CAPABILITIES

● Active equity strategies	\$35.2B
● Alternative strategies	\$14.1B
● Asset allocation and customized mandates	\$2.9B

## LEADERS IN FINANCIAL THEORY



**ERIC H. SORENSEN, Ph.D.**  
President and Chief Executive Officer  
*Investing since 1986*  
*PanAgora since 2004*



**EDWARD E. QIAN, Ph.D., CFA**  
Chief Investment Officer and Head of Research, Multi Asset  
*Investing since 1996*  
*PanAgora since 2005*



**GEORGE D. MUSSALLI, CFA**  
Chief Investment Officer and Head of Research, Equity  
*Investing since 1995*  
*PanAgora since 2004*



**MICHAEL H. TURPIN, CFA**  
Chief Operating Officer  
*Industry since 1991*  
*PanAgora since 1991*



**ROBERT JOB, CFA**  
Head of Global Distribution  
*Industry since 1992*  
*PanAgora since 2004*



PanAgora researchers have published two books and numerous academic articles available at [panagora.com](http://panagora.com).

### **Sub-advisory relationship with Putnam Investments**

PanAgora Asset Management is a sub-advisor to three mutual funds that pursue liquid alternative strategies and are distributed by Putnam Retail Management.

Founded in 1937, Putnam Investments is a global money management firm with 80 years of experience serving investors, financial advisors, and institutions. Putnam managed \$168 billion in assets as of September 30, 2017. Putnam operates from offices in Boston, London, Frankfurt, Tokyo, Singapore, and Sydney.

PanAgora Asset Management and Putnam Investments are affiliated members of the Power Financial Corporation of Canada family of companies.

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**A world of investing.<sup>®</sup>**



For informational purposes only. Not an investment recommendation.

All funds involve risk, including the loss of principal.

Investors should carefully consider the investment objectives, risks, charges, and expenses of a fund before investing. For a prospectus, or a summary prospectus if available, containing this and other information for any Putnam fund or product, call your financial representative or call Putnam at 1-800-225-1581. Please read the prospectus carefully before investing.