Financial Data Professional Institute
Quantitative ESG Investing

Panel discussion with
Mike Chen, Ph.D., Director Equity Investing, PanAgora
George Mussalli, CFA, Managing Director & CIO Equity Investing, PanAgora

Hosted by
Mehrzad Mahdavi, Executive Director, FDP Institute
Mirjam Dekker, Project Manager, FDP Institute

www.fdpinstitute.org
April 1, 2020
Agenda

• Welcome
• Introductions

Mike Chen, Ph.D., Director Equity Investing, PanAgora
George Mussalli, CFA Managing Director & CIO Equity Investing, PanAgora
Mehrzad Mahdavi Executive Director FDPI
Mirjam Dekker Project Manager FDPI

• Panel discussion: Quantitative ESG Investing
• Q & A (please add your questions to the chat!)
FDP Institute Mission

• **Develop Future Financial Professionals** — through credentialing programs that require the application of AI and Data Science anchored by ethical framework to guide decision making.

• **Deliver Charter holder Value**
  • Active content development, thought leadership, best practices and methods,
  • Setting global standards for data driven informed decisions,
  • Advocate for FDP charter holders with employers

• **Build Professional Network and Ecosystem for Charter holders**
Growth of ESG Investment

• There is a global secular trend towards ESG investment
• US has been a global laggard but even in the US growth has been impressive
What is ESG Investing?

ESG 2.0

The traditional, exclusion-list based approach to ESG investing is no longer the only method employed in ESG investing.

Over the past several years, two alternative approaches have emerged and are becoming increasingly popular:

• **Integration**: ESG issues are only considered from the alpha-generating perspective of the investment portfolio.

• **Impact**: Portfolios are constructed with an aim to achieve both positive alpha and alignment with investor values on ESG issues.
Quant ESG at PanAgora

ESG Products

**Impact**: Global Sustainable Equity: Flagship Product

- ESG factors integrated for sustainability and alpha
- Unique materiality considerations further enhances returns
- Integrated portfolio construction (dual-objective optimisation)
- Infinitely customizable along both sustainability objective and sustainability/alpha tradeoff dimensions

**Integration**: Dynamic and Stock-Selector Portfolios

- ESG factors integrated for alpha
The economic landscape has changed.

Top S&P 500 Companies: 1960 to 2018

<table>
<thead>
<tr>
<th>1960</th>
<th>1980</th>
<th>2018</th>
</tr>
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<tbody>
<tr>
<td>AT&amp;T</td>
<td>GM</td>
<td>Apple</td>
</tr>
<tr>
<td>IBM</td>
<td>AT&amp;T</td>
<td>Microsoft</td>
</tr>
<tr>
<td>DuPont</td>
<td>Exxon</td>
<td>Amazon</td>
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<tr>
<td>Standard Oil Company</td>
<td>Standard Oil Company</td>
<td>Berkshire Hathaway Inc.</td>
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<tr>
<td>Union Carbide</td>
<td>Schlumberger</td>
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Components of S&P 500 Market Value

- Intangible Assets
- Tangible Assets

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<tbody>
<tr>
<td></td>
<td>17%</td>
<td>32%</td>
<td>68%</td>
<td>80%</td>
<td>84%</td>
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</tbody>
</table>

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ESG Efficient Frontier

Efficient Frontier of Alpha Return and ESG Metric
Kind reminders of upcoming webinars as we go through the Q & A. Add your questions in the chat room please.

**Q & A**

**WEBINAR SERIES**
**A Conversation With...**

*Ganesh Mani*
Adj. Faculty Carnegie Mellon

*Managing the Data Supply Chain*

April 7, 2020
1pm EDT

**WEBINAR SERIES**
**A Conversation With...**

*Rick Roche, CAIA*
Man. Dir. Little Harbor Advisors

*“Evolution of Machine Learning in Investment Mgmt.”*

April 22, 2020
1 pm EST
• Online Requirements

- Choose between two (2) Python or two (2) R programming classes (4-6 hours each).
- The online classes can be completed before or after FDP exam.
- No programming background is needed to complete the online classes or the FDP exam.

• FDP Exam

<table>
<thead>
<tr>
<th>8 Topics</th>
<th>Approximate Weight %</th>
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</thead>
<tbody>
<tr>
<td>1. Introduction to Data Science &amp; Big Data</td>
<td>5-10</td>
</tr>
<tr>
<td>2. Data Mining &amp; Machine Learning: Introduction</td>
<td>5-10</td>
</tr>
<tr>
<td>4. Data Mining &amp; Machine Learning: Classification &amp; Clustering</td>
<td>5-15</td>
</tr>
<tr>
<td>5. Data Mining &amp; Machine Learning: Performance Evaluation, Back testing &amp; False Discoveries</td>
<td>5-10</td>
</tr>
<tr>
<td>6. Data Mining &amp; Machine Learning: Representing &amp; Mining Text</td>
<td>5-10</td>
</tr>
<tr>
<td>7. Big Data, Data Mining &amp; Machine Learning: Ethical &amp; Privacy Issues</td>
<td>5-10</td>
</tr>
<tr>
<td>8. Big Data and Machine Learning in the Financial Industry</td>
<td>30-50</td>
</tr>
</tbody>
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Next exam window
October 26 – November 8, 2020

Updated curriculum available on May 10th
Registration opens May 10th

www.FDPInstitute.org
In Closing

- The Next FDP Exam: October 26 – November 8, 2020
- New curriculum will be available May 10th
- Registration opens May 10th
- For a recent candidate webinar go to [www.fdpinstitute.org/webinars](http://www.fdpinstitute.org/webinars)

Learn more about the FDP Institute at [www.fdpinstitute.org](http://www.fdpinstitute.org)