

YOUNGJU L. NIELSEN, PH.D

PROFILE

Professor of financial economics with more than 15 years of algorithmic trading and investment portfolio management experience in the G10 markets at Wall Street major firms.

- 15 Years of experience in building and implementing data-driven quantitative models for algorithmic, systematic trading and executing using tick level high-frequency data.
- Proven leadership to lead to an extremely profitable business and new business-building skills, coupled with the ability to direct strong teams of traders, quants, and IT professionals in the investment management business.
- Experience in managing a 6-billion-dollar active hedge fund portfolio under various global market situations.
- Five years of teaching experience for university and professional level audiences through on-line and off-line education.
- Best-selling investment book author.

RECENT PEER-REVIEWED PUBLICATION

- "Idiosyncratic Returns and Relative Value in the US Treasury Market" with professor Raunaq Pungaliya (2017) in Journal of Empirical Finance, 44 (2017) 125-144

COURSES TAUGHT

- Teaching portfolio can be submitted
- Teaching: Predictive analysis using machine learning and big data, Finance informatics, Python and R programming, Quantitative investing, Financial economics, Corporate finance, Foreign exchange market, Central bank policy and Statistics, Investment strategies using futures

REFERENCES

- Ben Meng, CIO of Calpers
- Raunaq Pungaliya, Professor at Graduate School of Business in Finance, Sungkyunkwan University,
- Linda Kreitzman, Executive Director at Haas School of Business, University of California, Berkeley:

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PROFESSIONAL SYNOPSIS: CURRENT POSITIONS

SUNGKYUNKWAN UNIVERSITY(*Seoul, Korea*)

Associate Professor, Graduate School of BusinessAug. 2019 - Current

Assistant Professor, College of EconomicsMar. 2015 – Feb. 2019

- Teaching: Finance informatics, Python and R Programming, Introduction to quantitative investing, Financial economics, Corporate finance, Foreign exchange market, Investment strategies using futures, Central bank policy and Statistics
- Research interest: Fixed income, tactical allocation, and hedge fund portfolio
- Global MOOC “Introduction to quantitative investing” at futurelearn.com
<https://www.futurelearn.com/courses/quantitative-investing>
- Global MOOC “Machine learning and big data for business problems” at coursera.com (To appear in the fall of 2020)

KOREA GOVERNMENT EMPLOYEES PENSION SCHEME (*Seoul, Korea*)

Advisory board Oct. 2016 - Current

Government Employees Pension Scheme is one of four national pension schemes.

- Advise on global investment, especially currency hedging issues.

BANK OF KOREA (*Seoul, Korea*)

Project (Review of Investment Process) Apr. 2016 – Jun. 2016

AdviserNov. 2017 - Current

Bank of Korea is the central bank of Korea. It manages \$500 Billion foreign reserve assets.

- Advise on the investment of foreign reserve assets.

DAESHIN ECONOMIC RESEARCH INSTITUTE (*Seoul, Korea*)

AdviserJan. 2020 - Current

Daeshin financial group is one of the major finance conglomerates in Korea.

- Advise on sustainable investment strategy research.

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PROFESSIONAL SYNOPSIS: PREVIOUS POSITIONS

GOTHENBURG UNIVERSITY, SCHOOL OF BUSINESS (*Gothenburg, Sweden*)

Visiting lecturer Jan. 2019 – Aug. 2019

SAMSUNG ASSET MANAGEMENT (*Seoul, Korea*)

Adviser Jun. 2015 – Jun. 2019

Samsung Asset Management is a subsidiary of Samsung and the largest asset manager in Korea

- Advised the CEO and Top Management on portfolio management and business matters.

QUANTAVIUM CAPITAL MANAGEMENT (*New York, NY*)

Partner/CIO Jul. 2012 to Jan. 2015

Quantavium's primary business is to manage global liquid fixed income through various quantitative/algorithmic alternative investment disciplines using a systematic execution approach.

- Built the business from the ground up with the team from CITI. Complete systematic trading technology and hedge fund operation infrastructure is built using most advanced technology.
- Managed separate accounts of world-leading institutional investors.

CITI (*New York, NY*)

Head of Systematic Trading, G10 Rates Feb. 2010 to May 2012

Managed a systematic trading business.

- Built rates systematic trading from the ground up and ran alpha strategy books (proprietary trading).
- Strategies including G7 macro, yield curve and US off-the-run bond arbitrage were managed through direct access to world major exchanges and ECNs.

BEAR STERNS & J.P. MORGAN (*New York, NY*)

Head of Fixed Income Systematic Trading QPSFI Jun. 2008 to Jun. 2009

Managing Director/Head of Fixed Income Systematic Trading Jun. 2007 to Jun. 2008

Built and managed global interest rates – statistical arbitrage – proprietary trading business.

- Built a fixed income proprietary trading business from scratch. Complete systematic trading infrastructure is composed of real-time data feed, database, models for trading decision making, order management system, graphic user interface, automatic trading execution through electronic platforms and automatic post-trade capture and PnL reporting.
- Executed trading strategies that were built over several years of statistical/quantitative research. Trading strategies used various statistical methods and yield curve fitting techniques.
- Major trading strategies included global government bond arbitrage (US, JP, FR, DE, IT, CA), Inflation linker forward curve strategy, global swap butterfly strategy, US swap spread strategy and global interest rate dislocation strategy.
- Approved to manage billions dollar capital in global bond strategies; generated profit 90% of months in 2008.

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PROFESSIONAL SYNOPSIS: PREVIOUS POSITIONS, CONT'

BARCLAYS GLOBAL INVESTORS (*San Francisco, CA*)

Principal/Research Officer, Senior Strategist..... Jun. 2005 to Jun. 2007

Assumed accountability for the development and research of quantitative trading ideas in global rates markets. Instruments included swaps, TIPS, Treasuries, agencies and options and futures of interest rate products.

- Developed and implemented strategies to include US Tips butterfly (IR 2), US BEI forward curve (IR 2), US BEI momentum (IR 1.5), US security selection (IR 1), US agency selection (IR 1), Global OTR dislocation (IR 3), Libor spread (IR 2) and US swap spread (IR 1.5).
- Achieved portfolio IR 4 through low correlation of strategies.
- Managed global fixed income multi-strategy hedge fund and \$3B-plus active strategy portfolios for various central banks and pension funds as a member of US investment team.
- Contributed to the development of client relationships by presenting and representing US fixed income strategy.

STATE STREET GLOBAL ADVISOR (*Boston, MA*)

Principal/Senior Analyst..... Jun. 2004 to Jun. 2005

Led US and UK fixed income quantitative research and launched quantitative trading program. Established and maintained research support relationship with fixed income investment clients such as pension funds, insurance firms and central banks.

- Developed fixed income strategies. (hedge fund portfolio optimization algorithm with tail-risk minimization and time-varying autocorrelation, global inflation linker country selection (IR 3) and US and UK break even inflation macro strategy (IR 2)).
- Launched client specific trading/portfolio management program of the G10 currency technical trading strategy with volatility regime shift (IR 2) for European government pension fund and dynamic asset allocation for PBGC.
- Published several white papers and videos, allocation to hedge funds with style—scenario-based conditional non-linear model, hedge fund portfolio protection when non-normality exists, global inflation linker investment, for internal and client purposes.

ALLIANZ GLOBAL INVESTORS (*San Francisco, CA & New York, NY*)

Vice President/Head of Quantitative Research..... Mar. 2003 to Jun.2004

Senior Associate/Quantitative Analyst/Intern/Project Intern..... Dec. 1999 to Mar. 2003

Initiated and developed a quantitative investment platform as one of the founding members of the alternative investment team. Led initiatives in hedge fund quantitative research.

- Held accountability for managing quantitative hedge fund portfolio and leading quantitative strategy due-diligence. Due diligence was conducted on world-leading hedge funds such as D.E. Shaw, GLG partners and Vega. Quantitative fund of hedge funds performed about IR 3 with 11% annualized returns over 2002-2004.
- Initiated and launched hedge fund products including quantitative fund of hedge funds portfolio, hedge fund index product and principal-protected hedge fund linked notes. Launched the first hedge fund retail product in German market – DKW's "optimizer" and "optimizer plus."

Additional Roles: Teaching Fellowship (University of Pittsburgh, 1998-1999)

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ADDITIONAL PART-TIME ACADEMIC EXPERIENCE

KONKUK UNIVERSITY (*Seoul, Korea*)

Visiting Scholar, College of Commerce and Economics 2009 Fall Semester
Taught finance courses for graduate and senior undergraduate students while holding a full-time position and leave at J.P. Morgan. Course description is on www.financeapprentice.com.

UNIVERSITY OF CALIFORNIA, BERKELEY (*Berkeley, CA*)

Instructor 2006
Taught a course—statistics for financial engineers—while holding a full-time position at Barclays Global Investors.

EDUCATION

- ◆ **Master of Financial Engineering (2003)**
WALTER A HAAS SCHOOL OF BUSINESS—UNIVERSITY OF CALIFORNIA, BERKELEY
**Nominated for Pyle finance research award.*
- ◆ **Ph.D. in Statistics/Statistical Computing (2001)**
UNIVERSITY OF PITTSBURGH
**Thesis: Assessment and Improvement of Neural Network*
**Received Mellon fellowship and University of Pittsburgh FAS Dean's scholarship.*
- ◆ **Master of Art in Applied Statistics (1998)**
UNIVERSITY OF PITTSBURGH
- ◆ **Bachelor of Art in Economics (1994)**
YONSEI UNIVERSITY (*Seoul, Korea*)

PROFESSIONAL LICENSES

- ◆ **NASD SERIES 7 & 63 & 65 & 3**
**Candidate of Associate of Society of Actuary with completion of Professionalism courses*

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PUBLICATIONS IN BOOKS AND PROCEEDINGS

- “How you are related to Nobel prize in economics” (to be published in Jul. 2020)
- “Asset Allocation for Millennials” (Sep. 2019), Ridi books
- “Principle of Quantitative Investment” (May 2019), Business books
- “Principle of Investment” (Mar. 2018), Wisdom house - “Best Seller” from major bookstore chains.
- “Global Investment War” (May 2017), Business Books – “Best Seller” from major bookstore chains. Financial economics theory & practice and Interview with world top traders and portfolio managers.
- “Seoul to Wall Street” (Nov. 2012), Adbooks – Non-fiction book of professional life as Wall Street professional.
- “Alternative Sharpe Ratio”, (2004), Risk Book, UK – Published in “Intelligent Hedge Fund Investing, Chapter 7”. Mathematical construction fund-of-funds (FOF) portfolios in the presence of skewness and kurtosis based on the concept of the Alternative Sharpe Ratio.
- “How Sharpe Funds of Funds are?”, (2004), Risk Book, UK – Published in “Intelligent Hedge Fund Investing”, Chapter 9. In-depth statistical analysis of hedge fund styles and FOF returns, building on and complementing well-known statistical techniques on investment analysis.
- “Scenario based Conditional Non Linear Model” (2004), Proceedings of American Statistical Association.
- “Statistics of Hedge Fund Portfolio Sharpe Ratio” (2003), Proceedings of American Statistical Association.

WORKING PAPERS

- “The Value of Due Diligence: The Case for Passive Hedge Fund of Funds” (June. 2018, with professor Raunaq Pugaliya) – We investigated the method to construct reasonable fund of hedge funds without expensive due-diligence. The paper is under revision with management science
- “Persistence of Macroeconomic News Surprise” (Jan. 2017) - Using more than 10 years of US Treasury futures high-frequency prices (tick-level transaction data), leading financial institutions’ economists’ macroeconomic expectations and macroeconomic releases, the persistence of macroeconomic news surprises in the US Treasury market was investigated. I find that macroeconomic news surprises produce a significant market impact in a very short time, which previous research often refers to as a “jump.” Market impact from significant surprises goes away quickly in most cases. Therefore, I can conclude that US Treasury high-frequency participants are updating their fundamentals according to surprises, but this process goes through availability bias and overreaction before rationalization. The speed of rationalization depends on other considerations such as the size of the surprise and overreaction.

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SELECTED INVITATIONS TO CONFERENCES

- CFA Korea annual conference (June 2019): "Machine learning and big data in the investment industry"
- FP conference (Dec. 2018): "Digital advisors"
- Global derivatives conference (Aug. 2017): "Currency hedging for pension investors"
- Erste Bank Global Asset Allocation Conference in Vienna (Dec. 2014): "Asset Allocation for Year 2015"
- Yonsei University (Apr. 2014): "Fear & Greed"
- University of Pittsburgh and Carnegie Mellon University mathematical finance seminar (Apr. 2012): "How academic research is different from practitioner's research"
- IAFE speech series (Oct. 2006): Invited as a speaker for "How I Became a Quant?"
- Risk 2005 Conference in Boston (June 2005): Invited as an instructor for hedge fund courses (statistical models in hedge fund portfolio construction)
- American Statistical Association Meeting in Toronto (Aug. 2004): Scenario Based Non-Linear Hedge Fund Model.
- Financial Engineering Practice Seminar (June 2004): University of California, Berkeley Haas Business School.
- The Global Derivative Conference 2004 in Spain (May 2004): "How to Screen Single Hedge Funds Based on Statistical Techniques That Go Beyond Linear Regression and Correlation"
- 2004 Casualty Society of Actuary Spring Meeting in Spring, CO (May 2004): Dependency in Financial Risk Factors
- Casualty Society of Actuary (2004): Research contribution "Correlation between Financial Risk Factors"
- Casualty Society of Actuary (2005): Research contribution to ERM book
- Carnegie Mellon University/University of Pittsburgh Statistics Seminar (Dec. 2003): "Statistical Arbitrage" Teaching Seminar
- RiskInvest 2003 in Boston (Nov. 2003): "Statistical Analysis in Hedge Fund Returns – Index Construction, Skewness and kurtosis, Conditional Factor Model"
- RiskInvest 2003 in London (Nov. 2003): "Statistical Analysis in Hedge Fund Returns – Index Construction, Skewness and kurtosis, Conditional Factor Model"
- Society of Actuary Annual Meeting in Orlando (Oct. 2003): "Exciting Instrument in Bear and Bull (TS64)"
- American Statistical Association Meeting in San Francisco (Aug. 2003) : "Statistical Properties of Hedge Fund Return and Hedge Fund Return Measures"
- Risk 2003 Conference in Boston (June 2003): Highest teaching evaluation. "Hedge Fund Portfolio Construction"

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OTHER SELECTED PROFESSIONAL SPEECHES

- Samsung electronics new global executive education (Jan. 2019): "Perspective 2019"
- Hyundai Leaders forum (Apr. 2018): "How you are fooled by yourself"
- Young CEO forum (Nov. 2017): "Global innovators in Finance"
- Yonsei University Asset Management Program (Oct. 2017): "Hedge fund investment"
- Government Employee's Pension (Oct. 2017): "Currency hedging for alternative investment"
- Samsung finance group (Sep. 2017): "Global innovator in Finance"
- Samsung asset management (June 2017): "Quantitative process in passive & active investment"
- Samsung Marine&Fire Insurance (May 2017): "Factors shifting global macroeconomics in 2017"
- Woongjin group executive meeting (Nov. 2016): "Change in financial environment and possible outcome in 2017"
- MBN (Maeil Business Network) live show (Nov. 2016): "Change in US political landscape and global financial market"
- Asset management master program at Yonsei University (Oct. 2016): "hedge fund investment"
- Graduate school of pension and insurance at Sungkyunkwan University (Oct. 2016): "hedge fund investment for pension fund"
- Future finance forum (Sep. 2016): "Change in global financial market environment"
- Samsung securities (Sep. 2016): "Hedge fund portfolio construction"
- Samsung card (Sep. 2016): "Process driven investment"
- Arirang TV (July 2016): "Brexit and its impact on European economy"
- Samsung finance master program (June 2016): "Change in global financial market"
- CNBC (June 2016): "BREXIT and its first market impact"
- Chartered Financial Analyst, CFA (June 2016): "global fixed income investment strategies"
- Samsung Group's CEO lecture (May 2016): Lecture for 40 CEOs of Samsung group "New trends in global financial market and disruptors"
- Korea Banking Institute (Apr. 2016): Lectures for Global Finance Leader Program "Asset Management Module"
- Samsung Securities (Mar. 2016): "hedge fund due-diligence"
- MBN (Maeil Business Network) live show (Jan. 2016): "Global Economy Overview 2016"
- Samsung Asset Management seminar (June, Sep., Dec. 2015): "fixed income strategies"
- Samsung Electronics (Mar. 2015): "Fear & Greed" – trader's psychology
- Korea Investment Management (Mar. 2015): "setting internal investment process"

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OTHER PROFESSIONAL ACTIVITIES

HANKUK ILBO (*Seoul, Korea*)

Columnist Mar. 2019 – Feb.2020

DONGA MEDIA (*Seoul, Korea*)

ColumnistFeb. 2017 – Jan. 2019

Donga is one of most representative media companies in Korea with daily newspaper, magazine and TV.

- 'Youngju Nielsen's Reading Global Economy' covers global economy subjects every two weeks.

CNBC

Host Feb. 2017 – Jun. 2017

- 'Youngju Nielsen's Wall Street Trends' covers investment strategies every two weeks.

CHOSUN MEDIA (*Seoul, Korea*)

Columnist Mar. 2013 – Jun. 2016

Chosun is most representative media companies in Korea with daily newspaper, magazine and TV.

- 'Youngju Nielsen's Wall Street Report' covers global investment subjects every three weeks.

OTHERS

- Biographic information: US Citizen, Norwegian Permanent Resident & Female
- Language: English(Fluent), Korean(Fluent), Norwegian(Basic)