

Frédéric Ducoulombier

Director, EDHEC-Risk Climate Impact Institute

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Frédéric Ducoulombier is the founding director of <u>EDHEC-Risk Climate Impact Institute</u> at EDHEC Business School. Based in London and Nice, the Institute studies both the consequences of climate change and related policies on asset prices and investment management and the contributions of the financial system to climate change mitigation and adaptation. As director, he is in charge of defining and steering implementation of the Institute's research strategy, developing partnerships and relationships with public and private stakeholders, and overseeing research dissemination and communications. Prior to that, he was ESG Director with index provider Scientific Beta in Singapore and a member of the company's executive committee. He fathered Scientific Beta's ESG incorporation approach, led the product design and negotiations that brought the company its first EUR10bn of assets tracking ESG indices, and created the methodology underpinning a successful family of sustainability ETFs. Beyond ESG incorporation, he introduced a reconciliation of competing approaches to factor investing that remains at the heart of the company's offering and has been adopted by competitors. He also originated the company's compliance framework and served as lead adviser along the CEO in the negotiations leading to the sale of the company to the Singapore Exchange (SGX) in 2020.

Prior to joining the index administration industry in 2015, he worked as business school and research centre administrator for some fifteen years. As EDHEC Business School's first Deputy Associate Dean for Graduates Programmes, he unified the operations and marketing of the School's international M.Sc. programmes and as Deputy Associate Dean for Research, he helped design and implement the School's distinctive "Research for Business" policy. During his ten-year tenure at EDHEC-Risk Institute, the School's centre for applied research in risk and asset management, he created and developed EDHEC Business School's first international executive education operations on three continents; co-designed, launched and developed the school's unconventional and highly successful Ph.D. in Finance program; and established its first research centre in Asia with the support of the Monetary Authority of Singapore. Before joining EDHEC Business School in 2002, he worked for three years at IÉSEG School of Management, where he advised on internationalisation and program design and served as Deputy Director of International Relations.

Besides his management duties, he has performed research and policy advocacy work that has focused on financial regulation. He is the author of reports on real estate investment management; the purported risks of exchange traded funds; the governance and transparency of financial indices; operational risks in the fund management industry; accounting for financial instruments; retirement provision models; sovereign investment vehicles; smart beta and factor investing; sustainability standards and disclosures for financial products; and the integration of ESG and climate change considerations into investment management. He has contributed to consultations pertaining to financial regulation organised by ESMA, the European Commission, IOSCO, and various industry taskforces and investor associations, including the TCFD and the IIGCC. He served on the Consultative Working Group of the European Securities Markets Authority's Financial Innovation Standing Committee from February 2015 to January 2017 and has been a member of the Portfolio Alignment Measurement workstream of the Glasgow Financial Alliance for Net Zero since February 2022.

He holds a master's in management from IÉSEG School of Management, a graduate certificate in East Asian Studies from a University of Montréal/McGill University program and is a Chartered Alternative Investment Analyst® designee.

COMMUNITY SERVICE

2022 on	Member, Portfolio Alignment Measurement workstream, <u>Glasgow</u> <u>Financial Alliance for Net Zero</u>
2021 on	Reviewer, Journal of Impact Investing and ESG
2015 – 2017	Member, Consultative Working Group, <u>Financial Innovation Standing</u> <u>Committee</u> , European Securities and Markets Authority, Paris, France
1999 – 2000	Director , Chinese Finance Association and Editor in Chief, Chinese Finance Association Newsletter, Boston, United States
1998 – 2000	Editor, Chinese Finance Association Newsletter, Boston, United States

PROFESSIONAL EXPERIENCE (NON-TEACHING)

10/2022 on	Director, EDHEC-Risk Climate Impact Institute
04/2019 - 08/2022	ESG Director, Scientific Beta, Singapore
08/2016 - 03/2019	Director of Risk and Compliance, ERI Scientific Beta, Singapore
04/2015 - 07/2016	Business Development Director , Middle-East and Asia-Pacific ex Japan, ERI Scientific Beta, Singapore
04/2010 - 03/2015	Director, EDHEC Risk Institute—Asia, Singapore
09/2004 - 12/2014	<u>Director of Executive Education</u> , EDHEC-Risk Institute, France/Singapore
08/2009 - 03/2010	Deputy Associate Dean for Development, EDHEC Business School, France
11/2005 - 08/2009	Deputy Associate Dean for Research and Development, EDHEC Business School, France
Q4/2006 - Q1-2007	Lead consultant (consulting assignment under EDHEC-Risk Institute), market and new product feasibility study for leading alternative asset manager based in Paris, France
02/2002 - 08/2005	Programme Manager , <u>Master of Science in Finance</u> , EDHEC Business School, France
03/2002 - 08/2004	Finance Track Manager , <u>Master of Business Administration</u> , EDHEC Business School, France
04/2003 - 08/2004	Deputy Associate Dean for Graduate Programmes (<u>MSc Programmes</u>), EDHEC Business School, France
08/2002 - 08/2003	Programme Manager , Master of European Business, EDHEC Business -School, Lille, France
05/2001 - 02/2002	Project Manager : Master in International Business, IÉSEG School of Management, Lille, France



06/2000 - 02/2002**Deputy Director** of International Relations, IESEG School of Management, Lille, France **Acting Head** of International Exchange Office International Management Programme Programme Director Vice Head of International Relations 10/1999 - 02/2002Incoming and Outgoing Exchange Student Academic Advisor, IESEG School of Management, Lille, France 03/1999 - 02/2002Internationalisation Advisor, IÉSEG School of Management, Lille, France European Credit Transfer System Compliance Leader **Head** of Programme Structure Reform Committee Programme Internationalisation Leader International MBA Programme Structure and Curriculum Design Joint-Leader 05/1997 - 07/1997Assistant Research Engineer, European Centre for Industrial Innovation and Creativity, University of Valenciennes, France O2/1995 - O3/1995Lead consultant, market and new product feasibility study (multimedia

and online), Le Furet du Nord, Lomme, France (graduate internship)

PROFESSIONAL EXPERIENCE (TEACHING)

Corporate directorships.

Full-time

Excluded here:

2002 - 2019Associate Professor of Finance, Economics, Finance and Law Department, EDHEC Business School, Lille and Nice, France and Singapore 1999 - 2002Associate Professor of Finance, IÉSEG School of Management, Lille, France Foreign Expert acting as Associate Professor of Finance, 1997 - 1999Southwest University of Finance and Economics, People's Bank of China, Chengdu, China

Part-time / short-term

Fall 2001 Part-Time Lecturer in Finance, EDHEC Business School, Lille, France Winter 2000 Part-Time Lecturer in Intercultural Management and European Financial Integration, European Degree in International Management and BBA Programmes, University of Valenciennes, France Fall 1995 **Teaching Assistant**, Faculty of Commerce and Administration, Concordia University, Montreal, Canada



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Main courses designed

- Financial markets and institutions (BSc)
- Financial markets and instruments (MSc)
- Investment analysis and portfolio management (BSc, MSc, MBA)
- Mergers, acquisitions, and corporate restructuring (MBA)

Main executive education material designed

• Chartered Alternative Investment Analyst® Level I and Level II Study Notes and mock exams, EDHEC Asset Management Education, coauthor and editor (bi-yearly updated material from December 2004 to March 2008) and co-author (from September 2008 to September 2009)

Occasional professional development seminars delivered

Winter 2001	Occasional lecturer in macroeconomics and finance, <i>L'Ecole de la Bourse</i> , Euronext Paris, Lille, France
Winter 1998	Occasional lecturer in economics and finance, Industrial and Commercial Bank of China Training Centre, Chengdu, China
Summer 1998	Occasional lecturer in banking and finance, Summer Executive Program, Sino-French Centre, IÉSEG School of Management, Lille, France
Spring 1997	Part-Time instructor in internet tools for business and research, European Centre for Industrial Innovation and Creativity, University of Valenciennes, France

PUBLICATIONS AND CONTRIBUTIONS TO REGULATORY CONSULTATIONS

Scientific Beta External Technical Notes and Overview Papers

- 1. Overview: Understanding Net-Zero Investment Frameworks and their Implications for Investment Management, Scientific Beta, February 2022 (1st version: 09/2021).
- 2. <u>Overview: TCFD Recommendations and 2021 Guidance</u>, Scientific Beta, November 2021.
- 3. Overview of Scientific Beta ESG Option Upholding Global Norms and Protecting Multifactor Indices against ESG Risks, Scientific Beta, September 2019.
- Overview of Scientific Beta Enhanced ESG Reporting Supporting Incorporation of ESG Norms and Climate Change Issues in Investment Management Scientific Beta, July 2019.
- 5. Overview of Scientific Beta Low Carbon Option Supporting the Transition to a Low Carbon Economy and Protecting Multifactor Indices against Transition Risks, Scientific Beta, July 2019.
- 6. High-Efficiency Carbon Filtering, ERI Scientific Beta, May 2018.



ESG Incorporation – A Review of Scientific Beta's Philosophy and Capabilities, ERI Scientific Beta, March 2018.

Scientific Beta White Papers

- Scoring Against ESG? Avoiding the Pitfalls of ESG Scores in Portfolio Construction, December 2020.
- A Critical Appraisal of Recent EU Regulatory Developments Pertaining to Climate Indices and Sustainability Disclosures for Passive Investment, October 2020.
- 3. Understanding the Importance of Scope 3 Emissions and the Implications of Data Limitations, October 2020.
- Carbon Intensity Bumps on the Way to Net Zero, October 2020. 4.
- Unsustainable Proposals: A critical appraisal of the TEG Final Report on climate benchmarks and benchmarks' ESG disclosures and remedial proposals, February 2020.
- Scientific Beta ESG Option Upholding Global Norms and Protecting Multifactor Indices against ESG Risks, August 2019.
- Scientific Beta Enhanced ESG Reporting Supporting Incorporation of ESG Norms and Climate Change Issues in Investment Management Scientific Beta, Scientific Beta, July 2019.
- Scientific Beta Low Carbon Option Supporting the Transition to a Low Carbon Economy and Protecting Multifactor Indices against Transition Risks, Scientific Beta, June 2019.
- 9. ERI Scientific Beta Comments on the Mercer Report "Factor Investing: From Theory to Practice, ERI Scientific Beta, January 2018.
- 10. Accounting for Cross-Factor Interactions in Multi-Factor Portfolios: the Case for Multi-Beta Multi-Strategy High Factor Exposure Indices, ERI Scientific Beta, February 2017.
- 11. Methodological Differences across Multi-Factor Index Offerings, ERI Scientific Beta, August 2016.
- 12. Defensive Strategies: Bringing Diversification to, and Going Beyond, Traditional Approaches, ERI Scientific Beta, March 2016.
- 13. Scientific Beta Multi Smart Factor Indices: A Double Diversification Approach to Factor Investing, ERI Scientific Beta, February 2016, June 2016.

EDHEC-Risk Institute Publications and Position Papers

- Ten Misconceptions about Smart Beta: Analysing common claims on performance drivers, investability issues and strategy design choices, EDHEC-Risk Institute Position Paper, June 2016.
- 2. Superannuation v2.0: Towards the next generation of pension funds in Australia, EDHEC-Risk Institute (sponsored by AXA Investment Managers), July 2014.
- 3. Index Transparency A Survey of European Investors' Perceptions, Needs and Expectations, EDHEC-Risk Institute, March 2014.
- 4. Proposals for Better Management of Non-Financial Risks within the European Fund Management Industry, EDHEC-Risk Institute (sponsored by CACEIS), December 2012.
- 5. What Asset-Liability Management Strategy for Sovereign Wealth Funds? EDHEC-Risk Institute (sponsored by Deutsche Bank), March 2012.
- What are the Risks of European ETFs? EDHEC-Risk Institute, January 2012. This paper generated hundreds of stories in Chinese, Dutch, English, French, German,



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- Italian, Japanese, Russian, Spanish, and Swedish and fuelled subsequent contributions to regulatory consultations by ESMA and IOSCO.
- 7. Reactions to an EDHEC study on the fair value controversy, EDHEC-Risk Institute and EDHEC Financial Analysis and Accounting Research Centre, December 2008 (English and French versions).
- 8. <u>EDHEC European Real Estate Investment and Risk Management Survey</u>, EDHEC-Risk Institute (sponsored by Aberdeen Property Investors and Groupe UFG (now La Française AM), November 2007 (<u>English version</u>) and December 2007 (<u>French version</u>).

Regulatory and industry contributions and commentaries

- Response to the Taskforce on Climate-related Financial Disclosures Consultation on Proposed Climate-related Metrics, Targets, and Transition Plan Guidance, 18 July 2021.
- 2. Response to the Institutional Investors Group on Climate Change Net Zero Investment Framework for Consultation, 25 September 2020.
- 3. Response to the European Commission Call for Feedback on the Draft Delegated Act pertaining to Sustainability Disclosures in the Benchmark Statement, 5 May 2020.
- 4. Response to the European Commission Call for Feedback on the Draft Delegated Act pertaining to EU Climate Benchmarks, 5 May 2020.
- 5. Letter to DG FISMA in relation to the Call for Feedback on Draft Delegated Acts supplementing Regulation (EU) 2016/1011 as regards minimum standards for EU Climate Transition Benchmarks and EU Paris-aligned Benchmarks and as regards the explanation in the benchmark statement of how environmental, social and governance factors are reflected in each benchmark provided and published, 4 May 2020.
- 6. Response to the TEG Call for Feedback on Interim report on Climate Benchmarks and Benchmark ESG Disclosures (<u>summary</u>), 31 July 2019.
- 7. Letter to ECON Chair Ms Sharon Bowles on the Proposal for a Regulation of the European Parliament and of the Council on indices used as benchmarks in financial instruments and financial contracts, 14 March 2014.
- 8. <u>Letter to ECON Chair Ms Sharon Bowles on the Proposal for a Regulation on indices used as benchmarks</u>, 12 November 2013.
- 9. Comments by EDHEC-Risk Institute on the ESMA/EBA Consultation Paper titled Principles for Benchmarks-Setting Processes in the EU (ESMA/2013/12), February 2013.
- 10. Comments by EDHEC-Risk Institute on the IOSCO Consultation Report concerning Financial Benchmarks (CR01/13), February 2013.
- 11. <u>EDHEC-Risk Institute Contribution to the European Commission Consultation</u> Document on the Regulation of Indices, November 2012.
- 12. <u>Guidelines on ETFs and other UCITS issues</u>, Commentary on ESMA/2012/474, July 2012.
- 13. Comments from EDHEC-Risk Institute on the IOSCO Consultation Report CR05/12 concerning the principles for the regulation of Exchange Traded Funds, June 2012.
- 14. EDHEC-Risk Institute comments on ESMA Consultation Paper, ESMA/2012/44, March 2012.



Signed Articles in industry and general business publications

- 1. How to Consider Scope 3 Emissions, Asian Investor, EDHEC Research Insights supplement, November/December 2020, pp. 26-29.
- 2. A critical appraisal of recent EU regulatory developments pertaining to climate indices and sustainability disclosures for passive investment, IPE, EDHEC Research Insights supplement, Autumn 2020, pp.14-18.
- Carbon intensity bumps on the way to net-zero, IPE, EDHEC Research Insights supplement, Autumn 2020, pp. 18-23.
- 4. Understanding the importance of Scope 3 emissions and the implications data limitations, IPE, EDHEC Research Insights supplement, Autumn 2020, pp. 24-26.
- 5. Supporting the Transition to a Low Carbon Economy: the Scientific Beta Low Carbon Option, P&I, Research for Institutional Money Management Supplement, Number 22, December 2019, pp. 24-28.
- Upholding Global Norms and Protecting Multi-Factor Indexes against ESG Risks: the Scientific Beta Low Carbon Option, P&I, Research for Institutional Money Management Supplement, Number 22, December 2019, pp. 29-33.
- 7. A Low Carbon Fiduciary Option, AsianInvestor, EDHEC Research Insights supplement, Winter 2019, pp. 27-31
- 8. An ESG Fiduciary Option, AsianInvestor, EDHEC Research Insights supplement, Winter 2019, pp. 32-26.
- 9. Scientific Beta low carbon option, IPE, EDHEC Research Insights supplement, Autumn 2019, pp. 24-26.
- 10. Scientific Beta ESG option, IPE, EDHEC Research Insights supplement, Autumn 2019, pp. 27-29.
- 11. Scientific Beta enhanced ESG reporting, IPE, EDHEC Research Insights supplement, Autumn 2019, pp. 30-32
- 12. Practical Applications of Accounting for Cross-Factor Interactions in Multi-Factor Portfolios without Sacrificing Diversification and Risk Control, Practical Applications, Volume 5, Number 3, January 2018.
- 13. Difference between Defensive Strategies and the Low Risk Factor, P&I, Research for Institutional Money Management Supplement, Special Issue: Smart Factor Investing, Volume 1, Number 13, December 2016, pp. 14-16.
- 14. Alternative Approaches to Limiting Concentration in Minimum and Low Volatility Strategies, P&I, Research for Institutional Money Management Supplement, Special Issue: Smart Factor Investing, Volume 1, Number 13, December 2016, pp. 18-22.
- 15. Dynamic Strategies that are Defensive When Needed, P&I, Research for Institutional Money Management Supplement, Special Issue: Smart Factor Investing, Volume 1, Number 13, December 2016, pp. 23-29.
- 16. The Live Performance of Multi Smart Factor Indexes, P&I, Research for Institutional Money Management Supplement, Special Issue: Smart Factor Investing, Volume 1, Number 13, December 2016, pp. 30-34.
- 17. Distinction between exposure to a defensive strategy and benefitting from the reward to the Low Risk factor, AsianInvestor, EDHEC Research Insights supplement; November 2016, pp.10-14.
- 18. Smart factor indices and defensive strategies, AsianInvestor, EDHEC Research Insights supplement; November 2016, pp.16-22.
- 19. Achieving dynamic defensive strategies, AsianInvestor, EDHEC Research Insights supplement; November 2016, pp.24-32.



- 20. Defensive strategies (I): concepts underlying low risk equity strategies, IPE, EDHEC-Risk Institute Research Insights supplement, Autumn 2016, pp. 15-18.
- 21. Defensive strategies (II): revisiting traditional defensive strategies with smart factor indices, IPE, EDHEC-Risk Institute Research Insights supplement, Autumn 2016, pp. 19-23.
- 22. Defensive strategies (III): towards dynamic defensive strategies, IPE, EDHEC-Risk Institute Research Insights supplement, Autumn 2016, pp. 23-28.
- 23. Methodological differences across multi-factor index offerings, IPE, EDHEC-Risk Institute Research Insights supplement, Autumn 2016, pp. 32-40.
- 24. Practical Applications of Diversified or Concentrated Factor Tilts?, Practical Applications, Fall 2016, Volume 4, no.1, pp. 39-42.
- 25. Concentrate or Diversify What is the Best Way to Gain Factor Exposure?, AsianInvestor, EDHEC Research Insights supplement, March 2016, pp.2-6.
- 26. Diversified or concentrated factor tilts?, IPE, EDHEC-Risk Institute Research Insights supplement, Spring 2016, pp. 2-4.
- 27. Raising the bar for supers, Asia Asset Management, November 2014, pp. 42-43.
- 28. Towards improved pension funds in Australia, AsianInvestor, Edhec-Risk Institute Research Insights supplement, October 2014, pp.2-6.
- 29. Towards a new generation of pension funds in Australia, Top 1000 funds, 10 October 2014.
- 30. Index transparency: a survey of European investors' perceptions, needs and expectations, IPE, EDHEC-Risk Institute Research Insights supplement, Summer 2014, pp. 2-3.
- 31. <u>Index Transparency a Survey, Commodities Now, May 2014.</u>
- 32. Index transparency: recent regulatory developments, Asia Asset Management, Vol. 19 No.2, February 2014.
- 33. Index transparency recent regulatory developments, IPE, EDHEC-Risk Institute Research Insights supplement, Winter 2014, pp. 7-9.
- 34. Putting it in layman's terms A critical look at the IOSCO principles for the regulation of ETFs, ETFI Asia, 3rd quarter 2013.
- 35. The future of pensions in East Asia: Is demography destiny or can asset management make a difference?, IPE, EDHEC-Risk Institute Research Insights supplement, Summer 2013, pp. 7-10.
- 36. Protecting investors against non-financial risks, AsianInvestor, Edhec-Risk Institute Research Insights supplement, June 2013, pp.6-9.
- 37. Index transparency and the false promises of governance, IPE.com, 15 May 2013.
- 38. Index transparency—A European perspective: Regulatory developments and investor requirements, Journal of Indexes Europe, May/June 2013.
- 39. The Dangers of UCITS, Funds Europe, 8 May 2013.
- 40. Proposals for better management of non-financial risks within the European fund management industry, IPE, EDHEC-Risk Institute Research Insights supplement, Spring 2013, pp. 2-4.
- 41. Doing what it says on the tin, Asia Asset Management, Vol. 18 No.3, March 2013.
- 42. Three ways to better manage non-financial risk, Investment Magazine, March 2013
- 43. Brand Protection, Funds Europe, 6 March 2013.
- 44. Proposals for better recognition and management of non-financial risks, CACEIS News, No. 32, January 2013.

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- 45. What asset-liability management strategy for sovereign wealth funds?, IPE, EDHEC-Risk Institute Research Insights supplement, Autumn 2012, pp. 10-12.
- 46. Reactions to ESMA's ETF guidelines, ETFI Asia, 3rd quarter 2012.



- 47. <u>The True Risks of European ETFs</u>, *Institutional Investor Guides: ETFs and Indexing*, Summer 2012, pp. 112-117.
- 48. SWFs need customisation and engagement, Investment Magazine, 21 May 2012.
- 49. Sovereign wealth needs risk management, Talking Head, *Financial Times*, 23 April 2012.
- 50. Systemic risk and ETFs, Hedge Fund Review, March 2012.
- 51. The true risks of ETFs, Asia Asset Management, Vol. 17 No. 2, February 2012.
- 52. <u>Indexing vehicle preferences the results</u>, *IPA*, September/October 2011.
- 53. Comment gérer un portefeuille immobilier ? (How to manage a real estate portfolio), *Option Finance*, 14 January 2008.
- 54. <u>Une allocation cible moyenne de 10 % dans l'immobilier</u> (10% targeted allocation to real estate), *La Tribune*, 11 December 2007.
- 55. Taking stock, IPE Real Estate, November/December 2007.
- 56. Property derivatives and the hedging fallacy, IPE Real Estate, July/August 2007.
- 57. A flurry of new indices, IPE Real Estate; May/June 2007.
- 58. Options on the line, *IPE Real Estate*; March/April 2007.
- 59. The future shape of real estate, IPE Real Estate; January/February 2007.
- 60. <u>L'invité : Frédéric Ducoulombier Les premières leçons de la débâcle d'Amaranth</u> (The early lessons from the Amaranth debacle), *Le Temps* (Switzerland); 13 October 2006.

Academic publications

- Author of <u>Understanding the Importance of Scope 3 Emissions and the Implications of Data Limitations</u>, *The Journal of Impact & ESG Investing*, Summer 2021, Vol.1, Issue 4, pp. 63-71.
- Co-author of <u>Carbon intensity bumps on the way to net zero</u> with Victor Liu, *The Journal of Impact & ESG Investing*, Spring 2021, Vol.1, Issue 3, pp. 59–73.
- Co-author of <u>Accounting for Cross-Factor Interactions in Multi-Factor Portfolios without Sacrificing Diversification and Risk Control</u> with Noël Amenc, Mikheil Esakia, Felix Goltz and Sivagaminathan Sivasubramanian, *The Journal of Portfolio Management*, Special Issue 2017, Vol. 43, No. 5: pp. 99–114.
- Co-author of <u>Diversified or Concentrated Factor Tilts?</u> with Noël Amenc, Felix Goltz, Ashish Lodh, and Sivagaminathan Sivasubramanian, *The Journal of Portfolio Management, Winter 2016*, Vol. 42, No. 2: pp. 64–76.
- Co-author of the francophone edition of Corporate Finance by Stephen Ross, Randolph Westerfield and Jeffrey Jaffe, with Georges Hübner, Pierre-Armand Michel, Hugues Pirotte and Guillaume Schier: "Finance Corporate", Dunod, Gestion Sup, 1,160 pages, 2005, ISBN: 2100486667.

INDUSTRY CONFERENCES, PRESENTATIONS AND SEMINARS

Seminars, presentations, interviews and roundtable discussions

- 1. « Understanding Net-Zero Investment Frameworks and their Implications for Investment Management, » Scientific Beta webinar, 22 March 2022.
- 2. « Net Zero Investment Frameworks Lessons for Equity investors, » Responsible Investor / Scientific Beta webinar, 13 July 2021.



- 3. « Alternative Data Sources in Climate Change and Building the Sustainable Portfolio, » roundtable discussion at IMAS Digital Summit 2021, 10 March 2021.
- 4. « From portfolio-level decarbonisation to real-world emissions reduction, » IPE webinar, 9 February 2021.
- 5. « Does a Good Overall Portfolio Climate Score always Correspond to a Positive Strategy for the Climate? » Q&A contribution to Scientific Beta webinar, 4 February, 2021.
- 6. « Using Carbon Intensity for Portfolio Management Why Denominators Matter, » Scientific Beta webinar, 14 January 2021.
- 7. « Can we Trust Scope 3 to Select Stocks based on their Climate Performance? » Scientific Beta webinar, 17 December 2020.
- 8. « AsianInvestor EDHEC Research Insights Supplement November/December 2020 Meet the Authors, » Scientific Beta webinar, 10 December, 2020.
- 9. « IPE EDHEC Research Insights Supplement Autumn 2020 Meet the Authors, » Scientific Beta webinar, 8 December, 2020.
- 10. « Current Misconceptions in ESG Investing: The Case of Low Carbon Strategies, » Q&A contribution to Scientific Beta webinar, 28 July 2020.
- 11. « Green and sustainable benchmarks #2, » presentation and discussion for Responsible Investing webinar, May 2020.
- 12. « How to Reconcile ESG and Factor Investing, » Scientific Beta webinar, 6 February 2020.
- 13. « Reconciling Low Carbon and Multi-factor Investment, » Scientific Beta webinar, 13 January 2020.
- 14. « How to Reconcile ESG and Factor Investing, » presentation at the EDHEC Scientific Beta Days Europe 2019, Amsterdam, October 2019.
- 15. « Is there an ESG Factor? » panel discussion chair at the EDHEC Scientific Beta Days Europe 2019, Amsterdam, October 2019.
- 16. « Reconciling Low Carbon and Multifactor Investment, » Responsible Investing webinar, June 2019.
- 17. « Smart Beta and Low Carbon Investing, » presentation to the French Chamber of Commerce of Singapore, Singapore, February 2017.
- 18. « Defensive when needed Leveraging the power of dynamic factor allocation to design defensive equity strategies with excellent upside capture, » presentation at Nomura Stock Index Seminar 2016, Tokyo, November 2016.
- 19. « In conversation: The future of smart beta in Asia, » panel discussion at Second ETF Asia Summit 2016, Singapore, November 2016.
- 20. « Understanding Smart Beta, » presentation to the French Chamber of Commerce of Singapore, Singapore, June 2016.
- 21. « Finding value in a bear market, » panel discussion at Second ETF Asia Summit 2016, Taipei, June 2016.
- 22. « The rise of factor-based ETFs, » panel discussion at Second ETF Asia Summit 2016, Taipei, June 2016.
- 23. « Understanding Smart Beta, » presentation to CFA Society Malaysia, Kuala Lumpur, March 2016.
- 24. « Understanding Smart Beta, » presentation to CFA Society Philippines, Manila, March 2016.
- 25. « Bettering your Beta Exposure, » panel discussion at Middle-East Government Funds Roundtable, Abu Dhabi, February 2016.



- 26. « From Smart Beta to Smart Allocation: New Approaches to Defensive Equity Investing for Insurers, » scheduled presentation, Fourth Asia Investment Management Summit for Insurance, Hong Kong, November 2015.
- 27. « The New Active Management: Digging into Smart Beta, » interview session, Global-East Government Funds Roundtable, Singapore, November 2015.
- 28. « Understanding Smart Beta, » presentation to CFA Society Saudi Arabia, Riyadh, November 2015.
- 29. « Understanding Smart Beta, » presentation to Bursa Malaysia, Kuala Lumpur, July 2015.
- 30. « In focus: The smart beta debate, » panel discussion, ETF Asia Summit 2015, The Asset, Taiwan, July 2015.
- 31. « Beating the market passive, active or rules based strategies, » panel discussion, Investment Management Summit Asia 2015, Financial Times, Hong Kong, June 2015.
- 32. « Genesis of the intelligent index provider: Scientific Beta, » presentation at the French Science Week, Singapore, May 2015.
- 33. « Understanding Smart Beta, » presentation to CFA Society Qatar, Doha, May 2015.
- 34. « Understanding Smart Beta, » presentation to CFA Society Emirates, Abu Dhabi, April 2015.
- 35. « Understanding Smart Beta, » presentation to CFA Society Emirates, Dubai, April 2015.
- 36. « Global Risk Allocation Smart Beta Benchmarks, » workshop presentation, EDHEC-Risk Days, London, March 2015.
- 37. « From Smart Beta to Smart Factor Indices, » presentation, Third Asia Investment Management Summit for Insurance, Singapore, November 2014.
- 38. « Getting Smarter about Smart Beta, » workshop co-leadership, Global-East Government Funds Roundtable, Singapore, November 2014.
- 39. « Understanding Smart Beta, » presentation to CFA Society Kuwait, Kuwait City, October 2014.
- 40. « Index Transparency: What Investors Expect, » presentation introducing roundtable discussion, EDHEC-Risk Days Asia 2014, Singapore, July 2014.
- 41. « Next-generation Life Cycle Funds, Options for Singapore and Recommendations, » presentation, Health and Retirement Conference 2014, Singapore Actuarial Society, Singapore, June 2014.
- 42. « Securing Health and Retirement in the Future, » panel discussion, Health and Retirement Conference 2014, Singapore Actuarial Society, Singapore, June 2014.
- 43. « Index Transparency: What Investors Expect, » presentation introducing roundtable discussion, EDHEC-Risk Days Europe 2014, London, March 2014.
- 44. « Governance and Transparency of Indices regulatory developments and investor requirements, » presentation introducing roundtable discussion, EDHEC-Risk Days North America 2013, New York, October 2013.
- 45. « Evolution of ETFs: Opportunities and Challenges in Asia, » roundtable discussion, Fourth Annual dbAccess Asia Conference, Singapore, May 2013.
- 46. « The need for pension investment solutions in East Asia and implications for Singapore as a financial centre, » presentations and discussion, EDHEC-Risk Institute/MAS conversations, Singapore, May 2013.
- 47. « Governance and Transparency of Indices regulatory developments and investor requirements, » presentation and roundtable discussion, EDHEC-Risk Days Asia 2013, Singapore, May 2013.
- 48. « How to Manage the Non-Financial Risks of Investment Funds, » presentation and panel discussion, EDHEC-Risk Days Asia 2013, Singapore, May 2013.



- 49. « Governance and Transparency of Indices regulatory developments and investor requirements, a European perspective, » presentation and roundtable discussion, EDHEC-Risk Days Europe 2013, London, U.K., March 2013.
- 50. « How to Manage Non-Financial Risks: the True UCITS Reform, » presentation and panel discussion, EDHEC-Risk Days Europe 2013, London, U.K., March 2013.
- 51. « Regulation Research Insights for the Singapore Fund Management Industry, » presentations and discussion, EDHEC-Risk Institute/MAS conversations, Singapore, January 2013.
- 52. « Ideas on the positioning of Singapore as an international financial centre, » presentations and discussion, EDHEC-Risk Institute/MAS conversations, Singapore, January 2013.
- 53. « Addressing Myths and Misconceptions about the Risks of ETFs, » presentation, EDHEC-Risk Days Asia 2012, Singapore, May 2012.
- 54. « ETFs Roundtable: Perceived Risks and Benefits of ETF Investments and Regulators' Considerations: Towards More Regulation for ETFs?, » roundtable discussion, EDHEC-Risk Days Europe 2012, London, U.K., March 2012.
- 55. « ESMA And The Future Of European ETFs », panel discussion, IndexUniverse, webinar, February 2012.
- 56. « L'immobilier comme classe d'actifs » (Real estate as an asset class), presentation, EDHEC-Risk Institutional Investment Days 2008, Paris, France, June 2008.
- 57. « Real Estate Investment and Risk Management, » presentation and panel discussion, EDHEC-Risk Alternative Investment Days 2007, London, U.K., November 2007.
- 58. « Résultats de l'Enquête EDHEC sur l'Investissement et la Gestion du Risque Immobiliers en Europe » (Results of the pan-European EDHEC Survey of Real Estate Investment and Risk Management), Paris, France, October 2007.
- 59. « Real Estate: Class Contours, Access Routes and Vehicles, Role in a Portfolio, » presentation, Real Estate Forum 2007, SG Private Banking, Juan-Les-Pins, France
- 60. « Property Derivatives: Investors' Perceptions and Expectations, » seminar, Property Derivatives World 2007, London, U.K., July 2007.
- 61. « Using Derivatives as Part of Overall Portfolio Management, » panel discussion, Property Derivatives World 2007, London, U.K., July 2007.
- 62. « Real Estate Investment and Risk Management, » presentation and panel discussion, EDHEC-Risk Asset Management Days 2007, Geneva, Switzerland, March 2007.
- 63. « New Trends, Old Ideas for Asset Management, » seminar, Euronext Seminar 2004, Spain, July 2004.

Excluded here: Scientific Beta client seminar presentation, EDHEC Risk Institute Advisory Board presentations.

Conference chair

- 1. Fourth Asia Investment Management Summit for Insurance, Hong Kong, November 2015.
- 2. Third Asia Investment Management Summit for Insurance, Singapore, November 2014.



FEATURED IN THE MEDIA

Appeared in various capacities in miscellaneous reports carried by print media (including AGEFI, Asia Asset Management, AsianInvestor, the Business Times, Les Echos, Le Figaro, Finance Grandes Ecoles, Financer et Gérer le Logement, Financial News, the Financial Times (Business education section and FTfm supplement), FT Mandate, Funds Europe, Gestions Alternatives Magazine, Institutional Investor, The International Herald Tribune, Institutional Investor, IPE, IPE Real Estate, Journal of Indexes Europe, Option Finance, Pensions & Investments, Property Finance Europe, Revue Banque, Risk, Structured Products, Le Temps, The Asset, Today, La Tribune) and online publications and news services (e.g. All about Alpha, Asia in Focus, Asia Risk, Bernama, ETF Stream, Expert Investor, The Financial, FT.com, FT Adviser, FondsProfessionell, IndexUniverse (ETF.com), Ignites Asia, Ignites Europe, Institutional Invrestor, InstitutionalMoney, IPA, IPE, IPE Real Estate News, Morningstar, Opalesque (Alternative Market Briefing), MARHcomedge, HedgeWeek, efinancialcareers, Property Funds World, Reuters News, RISK.net, Structured Products, Top 1000 funds.)

Selected research expertise interviews:

On ESG

- La thématique climat s'impose au-delà des nouveaux indices, Option Finance, 24 June 2022.
- EU's new carbon-scoring metric bedevils investors, *RISK.net*, 17 November 2021.
- Climate change ETFs: A year of dramatic development, ETF Stream, 12 April 2021.
- Are climate change ETFs greenwashing?, ETF Stream, 1 February 2021.
- How not to use ESG scores for evaluating sustainability, *The Asset*, 20 December 2020.
- Verwendung des Enterprise Value bei Benchmarkregulierung kritisiert, Institutional Money, 12 November 2020.
- <u>Investors warned about carbon intensity metric in EU climate indices</u>, *IPE*, 12 November 2020.
- ESG integration demands definitions and data, ETFs Guide 2020, *IPE*, Fall 2020.
- EU sustainable finance: Impact uncertain, IPE, September 2020.
- Drilling down on ESG and factors with Scientific Beta, ETF Stream, 28 May 2019.

On smart beta, the regulation of indexing, indexing products and exchange-traded funds

- Academics Pick Factor Fight with Mercer, Institutional Investor, 10 January 2018.
- Practical Applications of Accounting for Cross-Factor Interactions in Multi-Factor
 Portfolios without Sacrificing Diversification and Risk Control, Practical Applications,
 Volume 5, no. 3, January 2018.
- <u>Practical Applications of Diversified or Concentrated Factor Tilts?</u>, Practical Applications, Fall 2016, Volume 4, no.1, pp. 39-42.
- Smart, smarter, smartest Smart beta strategies are making inroads in Asia, The Asset,
 September 2015.
- Providers keep methodology under wraps, Financial News, 9 June 2015.
- Smart Beta Transparency: In the Eyes of the Beholder, *ETF.com*, 25 May 2015.
- <u>INDEX TRANSPARENCY: Transparent guidance</u>, *Funds Europe*, 17 September 2014
- The Practical Implications of the Regulation of Indices and Benchmarks, RIMES Insight, 18 June 2014.
- IOSCO's Index Guidelines: What Will Change?, europe.etf.com, 24 April 24, 2014.



- Smart Beta Risks Are Not Clear Enough, Index Universe.eu, 19 November 2013.
- Index licensing fees: heading for a fall?, Structured Products, 14 August 2013.
- IOSCO softens its approach towards equity indexes on the final version of its principles for financial benchmarks, *Structured Products*, 24 July 2013.
- IOSCO Benchmark Principles Spark Mixed Reactions, IndexUniverse.eu, 19 July 2013.
- ETF indexes face clean up, *Risk*, 16 July 2013.
- ESMA Index Rules Spark Market Alarm Bells, *IndexUniverse.eu*, 26 March 2013.
- <u>Index Business Rife With Conflicts Of Interest, Says EDHEC</u>, *IndexUniverse.eu*, 19
 December 2012.
- Edhec warns of narrow focus on ETF risks, Top 1000 funds, 18 January, 2012.
- Consultation de l'ESMA sur les ETF: « Le régulateur n'a pas fait l'erreur de créer une ségrégation artificielle entre les fonds » (ESMA consultation on ETFs: the regulator has avoided the pitfall of creating an artificial distinction between funds), Revue Banque, 28 February 2012.

On real estate

- Flight risk, *IPE Real Estate*, November/December 2008.
- Refracted Reflection, IPE Real Estate, January/February 2008.
- <u>Un marché perturbé par la crise des subprimes; Pour une gestion active de l'immobilier, Gestions Alternatives Magazine</u>, 1 January 2008.
- Les premiers OPCI institutionnels sur le marché, Gestions Alternatives Magazine, Novembre/Décembre 2007.
- <u>French study suggests derivatives 'over-hyped'</u>, *IPE Real Estate News*, 26 November 2007.
- Futures present for listed property, *IPE Real Estate News*, 10 September 2007.
- Un intérêt réel pour l'immobilier, Financer et Gérer le Logement, N°514, 9 May 2007, p.8.
- After Alpha, *IPE Real Estate*; May/June 2007, pp.38-39.
- An indirect property route to add flexibility and lower costs, FT Mandate, April 2007.
- Deutsche Börse launches REITs index, IPE Real Estate News, 23 April 2007.

Selected research policy and executive education interviews

- The business of learning, *Today*, 22 February 2011.
- En réponse à la crise, les cursus des masters en finance se réorganisent (In response to the crisis, the curricula of finance masters evolve), *Le Temps*, 15 January 2010.
- AM market goes back to school, MBAs spike, FT Ignites Europe, 18 February 2009.
- EDHEC PhD sees unexpected demand, Financial Times, 11 December, 2008
- More transformation for the Lille veteran, Financial Times, 17 September 2007 ("Veteran" Lille begeistert sich für den Wandel, Financial Times Deutschland, 23 September 2007.)

Selected media reports on the launch of EDHEC Risk Institute-Asia

- Arrival of French school EDHEC will add to pool of finance professionals, Today, 22
 February 2011.
- EDHEC-Risk Institute makes Asian debut, *The new nation*, 25 January 2011.
- EDHEC's Asian campus opens, Business Times, 21 January 2011.
- A Singapour, l'EDHEC mise sur la finance (In Singapore, EDHEC bets on finance), Les Echos, 31 May 2010.
- EDHEC-Risk Institute opens Asia centre in Singapore, *The Asset*, 3 May 2010.
- Business research institute sets up office in S'pore, *Business Times*, 30 April 2010.



PROFESSIONAL QUALIFICATIONS AND ACADEMIC DEGREES

2006	Chartered Alternative Investment Analyst®, Chartered Alternative Investment Analyst Association®, Amherst, United States of America
1998	Graduate Certificate, Cooperative Programme in East-Asian Administration and Communications, Centre for East Asian Studies, University of Montreal and McGill University, Montreal, Canada
1997	Diplôme IÉSEG (Master in Management), Finance Major, IÉSEG School of Management, Lille, France Graduate Thesis: Valuation of Interest Rate Derivative Securities: Methods and Models, Highest Honours
1993	Diplôme d'Études Universitaires Générales option Sciences Économiques (Associate/Bachelor's Degree in Economics), University of Paris Panthéon-Assas (Paris II), Paris, France

PROFESSIONAL ASSOCIATION MEMBERSHIP

Since 2006 Member, <u>Chartered Alternative Investment Analyst Association</u>[®],

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