

Alex Weissensteiner

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Institutional activities

since 2016 Coordinator of the *Quality Committee* (Presidio di Qualità)
since 2015 Director BSc Program *Economics & Management*

Education

08/2017 **Abilitazione 13/D4, fascia I** (postdoctoral lecture qualification) for the discipline *Mathematical Methods for Economics, Finance and Actuarial Science*.

06/2010 **Habilitation** (postdoctoral lecture qualification) at the Leopold Franzens University Innsbruck for the discipline *Business Studies*.

2000–2003 **PhD in Finance** at the Leopold Franzens University Innsbruck, Austria.
Degree with distinction (Dr. rer. soc. oec).

1993–1998 **Master of Business and Economics** at the Leopold Franzens University Innsbruck, Austria.
Degree with distinction (Mag. rer. soc. oec).

Academic activities

since 2015 Associate Professor in *Quantitative Finance*, **Free University of Bolzano**

2013–2014 Full Professor in *Financial Engineering*, **Technical University of Denmark**

since 2012 Contract professor in *Portfolio Management and Financial Risk Management*, **University of Liechtenstein**

2010–2012 Tenured researcher in *Financial Markets and Institutions*, **Free University of Bolzano**

2009–2010	Assistant professor at the Department of Banking and Finance, Leopold Franzens University Innsbruck
2006–2009	Researcher at the Department of Banking and Finance, Leopold Franzens University Innsbruck , financed by Oesterreichische Nationalbank and Tyrolean Science Fund
since 2005	Contract professor in <i>Finance for Non-profit Organizations</i> , Management Center Innsbruck
2002–2010	Teaching assistant in <i>Mathematical Finance</i> , Free University of Bolzano
1999–2006	Contract lecturer in <i>Financial Risk Management and Financial Derivatives</i> , Leopold Franzens University Innsbruck

Language skills

German (mother tongue), Italian (C1), English (C1)

1 Research

1.1 Fields of research

- mathematical methods for life-cycle asset allocation decisions, asset-liability management, pension finance
- financial engineering, scenario generation, asset pricing
- financial risk management
- market microstructure, strategic information processing, information economics

1.2 Publications

Weissensteiner A. (2009), A Q-learning approach to derive optimal consumption and investment strategies, *IEEE Transactions on Neural Networks*, 20(8), 1234-1243)

- Geyer A., Hanke M., Weissensteiner A. (2009), Life-cycle asset allocation and consumption using stochastic linear programming, *Journal of Computational Finance*, 12(4), 29-50
- Geyer A., Hanke M., Weissensteiner A. (2009), A Stochastic Programming approach for multi-period portfolio optimization, *Computational Management Science*, 6(2), 187-208
- Weissensteiner A. (2010), Using the Black-Derman-Toy interest rate model for portfolio optimization, *European Journal of Operational Research*, 202(1), 175-181
- Ferstl R., Weissensteiner A. (2010), Cash management using multi-stage Stochastic Programming, *Quantitative Finance*, 10(2), 209-219
- Ferstl R., Weissensteiner A. (2010), Back testing short-term treasury management strategies based on multi-stage Stochastic Programming, *Journal of Asset Management*, 11, 94-112
- Geyer A., Hanke M., Weissensteiner A. (2010), No-Arbitrage conditions, scenario trees, and multi-asset financial optimization, *European Journal of Operational Research*, 206(3), 609-613
- Ferstl R., Weissensteiner A. (2011), Asset-liability management under time-varying investment opportunities, *Journal of Banking & Finance*, 35(1), 182-192
- Lawrenz J., Weissensteiner A. (2012), Correlated Errors – Why a monotone relationship between forecast precision and trading profitability may not hold, *Journal of Business Finance & Accounting*, 39(5), 675-699
- Hanke M., Weissensteiner A. (2012), Optimale langfristige Asset Allocation für Privatinvestoren - Ausgewählte praxisrelevante Erkenntnisse aus der finanzwirtschaftlichen Literatur, *Journal of Banking and Financial Research*, 514-520
- Pedersen A.M., Poulsen R., Weissensteiner A. (2013), Financial planning strategies for young households, *Annals of Operations Research*, 205(1), 55-76
- Geyer A., Hanke M., Weissensteiner A. (2013), Scenario tree generation and multi-asset financial optimization problems, *Operations Research Letters*, 41, 494-498

- Geyer A., Hanke M., Weissensteiner A. (2014), No-arbitrage bounds for scenario generation, *European Journal of Operational Research*, 236, 657-663
- Marinelli C., Weissensteiner A. (2014), On the relation between forecast precision and trading profitability of financial analysts, *Journal of Financial Markets*, 20, 39-60
- Geyer A., Hanke M., Weissensteiner A. (2014), No-arbitrage ROM simulation, *Journal of Economic Dynamics and Control*, 45, 66-79
- Hanke M., Poulsen P., Weissensteiner A. (2015), Where would the EUR/CHF exchange rate be without the SNB's guarantee?, *Journal of Futures Markets*, 35(12), 1103-1116
- Konicz A.K., Pisinger D., Weissensteiner A. (2015), Optimal annuity portfolio under inflation risk, *Computational Management Science*, 12(3), 461-488
- Konicz A.K., Pisinger D., Weissensteiner A. (2016), Optimal retirement planning with a focus on single and multilife annuities, *Quantitative Finance*, 16(2), 275-295
- Geyer A., Hanke M., Weissensteiner A. (2016), Inflation forecasts using a Nelson/Siegel representation of nominal and real yield curves, *The Quarterly Review of Economics and Finance*, 60, 180-188
- Bjerring T., Ross O., Weissensteiner A. (2016), Feature selection for portfolio optimization, *Annals of Operations Research*, 256(1), 21-40
- Hanke M., Penev S., Schief W., Weissensteiner A. (2017), ROM simulation with exact means, covariances, and multivariate skewness, *European Journal of Operational Research*, 263(2), 510-523
- Durante F., Foscolo E., Weissensteiner A. (2017), Dependence between stock returns of Italian banks and the sovereign risk, *Econometrics*, 5(2), 23, 1-14
- Hanke M., Poulsen R., Weissensteiner A. (2017), Event-related exchange rate forecasts combining betting quotes and risk-neutral densities from option prices, *Journal of Financial and Quantitative Analysis*, forthcoming

Bjerring T., Rasmussen K., Weissensteiner A. (2018), Portfolio selection under supply chain predictability, *Computational Management Science*, 15(2), 139-159

Hanke M., Poulsen R., Weissensteiner A. (2018), The CHF/EUR Exchange Rate during the Swiss National Bank's Minimum Exchange Rate Policy: A Latent Likelihood Approach, *Quantitative Finance*, forthcoming

1.3 Contributions to books

Geyer A., Hanke M., Weissensteiner A. (2012), Optimale Asset Allocation im Zeitablauf - ein Überblick über Modelle und Lösungsverfahren, in R. Frick, P. Gantenbein and P. Reichling (ed.), *Asset Management*, Haupt Verlag, 125-132

Hanke M., Weissensteiner A. (2017), Arbitrage-free Scenario Generation in Financial Optimization, in P. Brandimarte (ed.), *Wiley StatsRef-Statistics Reference Online*

1.4 Working papers

Evidence on the empirical relationship between forecast accuracy and recommendation profitability, with J. Lawrenz and K. Schredelseker

A premium for parameter uncertainty in equities, with M. Hanke

Optimal granularity for portfolio choice, with Nicole Branger and Katarína Lučivjanská

Correlated noise - On why passive investment might improve market efficiency

Portfolio optimization of commodity futures with seasonal components and higher moments, with T. Bjerring and K. Rasmussen

Long-term asset allocation under parameter uncertainty: Optimal portfolios with model and parameter uncertainty, with T. Dangl

1.5 Grants

1. Affiliation with **Leopold-Franzens University**, Innsbruck, Austria:

- (a) Oesterreichische Nationalbank: Life-cycle asset allocation using stochastic linear programming (EUR 71000, July 2006 to May 2008)
- (b) Tyrolean Science Fund: Life-cycle asset allocation using stochastic linear programming (EUR 15000, March 2008 to November 2008)
- (c) Oesterreichische Nationalbank: Life-cycle asset allocation. Comparison of different solution methods (EUR 85000, September 2008 to February 2011)

2. Affiliation with **Free University of Bolzano**, Italy:

- (a) Central Research Council: Strategic Information Disclosure and Persuasion - On Financial Expertise by Multiple Analysts (EUR 46000, February 2016-February 2017)
- (b) EU Erasmus+, Understanding Pensions in Europe, joint project with the University of Liechtenstein, (EUR 294162, EUR 77890 for the Free University of Bolzano)
- (c) Central Research Council: Re-insurance of Hail Risks in South Tyrol (EUR 199900, May 2017-May 2020)

1.6 Invited Talks and Seminars

04.-07.11.2007 INFOMS Annual Meeting, invited speaker, Seattle, USA, “Life-cycle Asset Allocation Using Stochastic Linear Programming”

08.03.2011 Research Seminar Ca’ Foscari University of Venice, Italy, “Correlated Errors - Why a Monotone Relationship Between Forecast Precision and Trading Profitability May Not Hold”

01.-03.08.2012 Annual Conference of the German Classification Society, semiplenary talk, Hildesheim, Germany, “No-arbitrage Bounds for Generating Financial Scenarios”

22.05.2013 Brown-Bag Seminar, Vienna Graduate School of Finance (VGSF), Vienna, Austria, “On the Relation between Forecast Precision and Trading Profitability of Financial Analysts”

14.01.2014 Copenhagen Finance IT Region (CFIR), Copenhagen, Denmark, “On the Relation between Forecast Precision and Trading Profitability of Financial Analysts”

- 18.06.2015** 2nd IMA Conference on Mathematics in Finance, Manchester, UK, plenary talk
- 19.08.2015** WU Gutmann Center Symposium 2015: Retirement and Asset Management, Vienna, A
- 19.06.2018** Finance Research Seminar TUM, Technical University Munich, Germany
- 21.08.2018** VSFV Vienna Symposium on Foreign Exchange Markets, Vienna, Austria

1.7 Talks (selected)

- 06.-08.09.2006** Operations Research 2006, Karlsruhe, Germany, “Life-cycle Asset Allocation Using Stochastic Linear Programming”
- 10.-12.05.2007** Euro Working Group on Financial Modeling, Rotterdam, Netherland, “Life-cycle Asset Allocation Using Stochastic Linear Programming”
- 26.-27.07.2007** Computational Methods in Finance Conference, Waterloo, Canada, “Life-cycle Asset Allocation Using Stochastic Linear Programming”
- 26.-28.08.2007** International Conference on Stochastic Programming, Vienna, Austria, “Cash Management Using Multi-Stage Stochastic Programming”
- 04.-06.06.2008** Numerical Methods for Finance, Dublin, Ireland, “Life-cycle Asset Allocation Using Stochastic Linear Programming”
- 02.-05.09.2008** Workshop on Numerical Linear and Nonlinear Stochastic Programming, Edinburgh, Scotland, “ALM Models, Stochastic Programming, and the Absence of Arbitrage”
- 10.-11.10.2008** DGF 15th Annual Meeting of the German Finance Association, Münster, Germany, “Life-cycle Asset Allocation Using Stochastic Linear Programming”
- 01.-03.05.2009** 6th International Conference on Computational Management Science, Geneva, Switzerland, “ALM Models, Stochastic Programming, and the Absence of Arbitrage”

- 01.-05.08.2009** AAA American Accounting Association 2009 Annual Meeting, New York, USA, “Correlated Errors”
- 28.-29.01.2010** XI Workshop on Quantitative Finance, Palermo, Italy, “ALM under Time-varying Investment Opportunities”
- 28.-30.07.2010** 7th International Conference on Computational Management Science, Vienna, Austria, “Time-varying Inflation Risk”
- 31.-02.09.2011** OR2011, Zürich, Switzerland, “No-arbitrage Bounds for Generating Financial Scenarios”
- 18.-20.04.2012** 9th International Conference on Computational Management Science, London, UK, “No-arbitrage Bounds for Generating Financial Scenarios” (session organizer)
- 08.-12.07.2013** XIII International Conference on Stochastic Programming, Bergamo, Italy (main proponent of the mini-symposium “Scenario Generation for Financial Optimization”)
- 08.-12.09.2013** Accounting and Audit Convergence 2013, Cluj Napoca, Romania, “On the Relation between Forecast Precision and Trading Profitability of Financial Analysts”
- 27.-28.09.2013** 20th Annual Meeting of the German Finance Association (DGF), Wuppertal, Germany, “On the Relation between Forecast Precision and Trading Profitability of Financial Analysts”
- 09.-11.04.2014** International Conference on Applied Mathematical Optimization and Modelling, Warwick, UK, “No-Arbitrage ROM Simulation” (session organizer)
- 29.-31.05.2014** 11th International Conference on Computational Management Science, Lisbon, Portugal, “No-Arbitrage ROM Simulation” (session organizer)
- 04.-06.12.2014** Euro Working Group for Commodities and Financial Modeling, Milan, Italy “Analyzing the Swiss National Bank’s euro exchange rate policy: A latent likelihood approach”
- 01.-04.09.2015** International Conference of Operations Research, Vienna, Austria, “Analyzing the Swiss National Bank’s euro exchange rate policy: A latent likelihood approach” (session organizer)

- 08.-10.06.2016** International Conference on Applied Mathematical Optimization and Modelling, Brno, Czech Republic, “Correlated noise” (member of program committee)
- 31.03.2017** Annual Conference of the Swiss Society for Financial Market Research, Zurich, Switzerland, “Correlated noise: Why passive investments might improve market efficiency”
- 30.-01.06.2017** CMS Conference on Computational Management Science, Bergamo, Italy, “Correlated noise: Why passive investments might improve market efficiency” (member of scientific committee)
- 14.-16.09.2017** AMASES Annual Meeting, Cagliari, Italy, “Long-term asset allocation under parameter uncertainty: Optimal portfolios with model and parameter uncertainty”
- 22.-25.09.2017** INFORMS Annual Meeting, Houston, USA (invited session organized by Victor DeMiguel) “Long-term asset allocation under parameter uncertainty: Optimal portfolios with model and parameter uncertainty”

1.8 Editorial work / scientific membership

- Guest editor and member of the editorial board of the Journal *Risks* - Editor: Mogens Steffensen.
- member of AMASES - Associazione per la Matematica Applicata alle Scienze Economiche e Sociali

1.9 Member of scientific committees

- XIII International Conference on Stochastic Programming, 2013, Bergamo, Italy
- International Conference on Applied Mathematical Optimization and Modelling, 2014, Warwick, United Kingdom
- 11th International Conference on Computational Management Science, 2014, Lisbon, Portugal
- 12th International Conference on Computational Management Science, 2015, Prague, Czech Republic

- Conference on Applied Mathematical Optimization and Modelling, 2016, Brno, Czech Republic
- Conference on Computational Management Science, 2017, Bergamo, Italy

1.10 Phd student supervision/referee

- PhD referee Claus Madson (Technical University of Denmark, 2013)
- PhD supervisor: Agnieszka Konicz (Technical University of Denmark, 2011-2014)
- PhD supervisor: Thomas Trier Bjerring (Technical University of Denmark, 2014-2017)
- PhD supervisor: Andrea Rigamonti (Free University of Bolzano, start 2016)
- PhD Referee 2017 and 2018 for the course “Mathematical Methods of Economics, Finance and Actuarial Sciences”, University of Bergamo, Italy

1.11 Refereeing

Algorithmic Finance, Annals of Operations Research, Applied Economics, Computational Management Science, Computers & Operations Research, Decisions in Economics and Finance, Emerging Markets Finance and Trade, European Journal of Finance, European Journal of Operational Research, IEEE Transactions on Neural Networks, International Journal of Banking, Accounting and Finance, International Review of Economics and Finance, International Journal of Finance and Economics, Journal of Asset Management, Journal of Banking & Finance, Journal of International Money and Finance, Kredit und Kapital, Oesterreichische Nationalbank Jubilaeumsfonds, Operations Research, Operations Research Perspectives, Quantitative Finance, SERIEs - Journal of the Spanish Economic Association, Risks, The Quarterly Review of Economics and Finance.

August 2018