

Xuezhong (Tony) He

Professor of Finance



EDUCATION

- Ph.D. Finance and Economics, University of Technology, Sydney, Australia (2001)
- Ph.D. Applied Mathematics, Flinders University, Australia (1995)
- M.Sc. Applied Mathematics, Hebei Normal University, China (1987)
- B.Sc. Pure Mathematics, Ningxia University, China (1982)

AREAS OF EXPERTISE

Asset pricing with heterogeneous beliefs; financial market modelling and bounded rationality; market microstructure and learning; nonlinear dynamics in finance and economics

BOOKS

1. Chiarella, Carl, He, Xuezhong, Sklibosios Nikitopoulos, Christina (2015), *Derivative Security Pricing: Techniques, Methods and Applications*, ISBN 978-3-662-45906-5, Dynamic Modeling and Econometrics in Economics and Finance, Vol. 21, Springer.
2. Dieci, R., X. He and C. Hommes (2014, eds). *Nonlinear Economic Dynamics and Financial Modelling: Essays in Honour of Carl Chiarella*, Springer. ISBN 978-3-319-07470-2

JOURNAL PUBLICATIONS (SELECTED)

1. He, X. and N. Treich (2017), Prediction market prices under risk aversion and heterogeneous beliefs, *Journal of Mathematical Economics* (accepted)
2. He, X. and L. Shi (2017), Index portfolio and welfare analysis under heterogeneous beliefs, *Journal of Banking and Finance*, 75, 64-79
3. He, X. & E. Lutkebohmert-Holtz & Y. Xiao (2017), Rollover risk and credit risk under time-varying margin, *Quantitative Finance*, 17(3), 455-469.
4. Chiarella, C. & He, X. & L. Shi & L. Wei (2017), A behaviour model of investment sentiment in limit order markets, *Quantitative Finance* (Forthcoming)
5. He, X. and H. Zheng (2016), Trading heterogeneity under information uncertainty, *Journal of Economic Behavior & Organization*, 130, 64-80.
6. He, X., K. Li and C. Wang (2016), Volatility clustering: a nonlinear theoretical approach, *Journal of Economic Behavior & Organization*, 130, 274-297.
7. He, X. and K. Li (2015), Profitability of Time Series Momentum, *Journal of Banking and Finance*, 53, 140-157.
8. He, X. and Y. Li (2015), Testing of a Market Fraction Model and Power-law Behaviour in the DAX 30, *Journal of Empirical Finance*, 31, 1-17.
9. Chiarella, C. X. He and L. Wei (2015), Learning, information processing and order submission in limit order markets, *Journal of Economic Dynamics and Control*, 61, 245-268.

10. Chiarella, C., S. ter Ellen, X. He and E. Wu (2015), Fear or fundamentals? Heterogeneous beliefs in the European sovereign CDS market, *Journal of Empirical Finance*, 32, 19-34.
11. Di Guilmi, C., X. He and K. Li (2014), Herding, trend chasing and market volatility, *Journal of Economic Dynamics and Control* 48, 349-373.
12. Chiarella, C, X. He and R. Zwinkels (2014), Heterogeneous expectations in asset pricing: Empirical evidence from the S&P500, *Journal of Economic Behavior & Organization*, 105, 1-16.
13. Chiarella, C, R. Dieci and X. He (2013), Time-varying beta: a boundedly rational equilibrium approach, *Journal of Evolutionary Economics*, 23, 609-639..
14. Chiarella, C., R. Dieci, X. He and K. Li (2013), An evolutionary CAPM under heterogeneous beliefs, *Annals of Finance*, 9, 185-215.
15. Chiarella, C, X. He and M. Zheng (2013), Heterogeneous expectations and exchange rate dynamics. *European Journal of Finance*, 19, 392-419.
16. He, X. and L. Shi (2012), Disagreement, correlation and asset prices, *Economics Letters*, 116, 512-515.
17. He, X. & L. Shi (2012), Disagreement in a multi-asset market, *International Review of Finance*, 12, 357-373
18. He, X. & K. Li (2012), Heterogeneous beliefs and adaptive behaviour in a continuous-time asset price model, *Journal of Economic Dynamics and Control*, 36, 973-987
19. Chiarella, C., X. He, W. Huang, and H. Zheng (2012), Estimating Behavioural Heterogeneity under Regime Switching, *Journal of Economic Behavior & Organization* 83, 446-460.
20. Chiarella, C., X. He and P. Pellizzari (2012), A dynamic analysis of the microstructure of moving average rules in a double auction market, *Macroeconomic Dynamics*, 16, 556-575.
21. Chiarella, C., R. Dieci and X. He (2011), Do heterogeneous beliefs diversify market risk? *European Journal of Finance*, 17(3), 241-258.
22. Chiarella, C, X. He and M. Zheng (2011), An analysis of the effect of noise in a heterogeneous agent financial market model, *Journal of Economic Dynamics and Control*. 35, 148-162.
23. Chiarella, C., R. Dieci and X. He (2011), Do heterogeneous beliefs diversify market risk? *European Journal of Finance*, 17(3), 241-258.
24. He, X. and M. Zheng (2010), Dynamics of moving average rules in a continuous-time financial market model, *Journal of Economic Behaviour and Organization*, 76, 615-634.
25. He, X, K. Li, J. Wei and M. Zheng (2009), Market stability switches in a continuous-time financial market with heterogeneous beliefs, *Economic Modelling*, 26, 1432-1442.
26. Chiarella, C, R. Dieci and X. He (2009) *Heterogeneity, Market Mechanisms, and Asset Price Dynamics*, Book chapter for the *Handbook of Financial Markets: Dynamics and Evolution*, Thorsten Hens and Klaus Reiner Schenk-Hoppe (Eds.), 277-344, Elsevier
27. He, X. and Li, Y.(2008), Heterogeneity, convergence, and autocorrelations, *Quantitative Finance*, 8, 59-79.
28. He, X. and Y. Li (2007), Power-law behaviour, heterogeneity, and trend chasing, *Journal of Economic Dynamics and Control*. 31, 3396-3426
29. Chiarella, C., R. Dieci and X. He (2007), Heterogeneous expectations and speculative behaviour in a dynamic multi-asset framework, *Journal of Economic Behaviour and Organization*, 62, 408-427.

30. Chiarella, C. X. He and C. Hommes (2006), A dynamic analysis of moving average rules, *Journal of Economic Dynamics and Control*, 30, 1729-1753.
31. He, X. and F. Westerhoff (2005), Commodity markets, price limiters and speculative price, *Journal of Economic Dynamics and Control*, 29, 1577-1596..
32. Chiarella, C. and X. He (2003), Heterogeneous beliefs, risk and learning in a simple asset pricing model with a market maker. *Macroeconomic Dynamics*, 7, 503-536.
33. Chiarella, C. and X. He (2003), Dynamics of beliefs and learning under al-processes-the heterogeneous case, *Journal of Economic Dynamics and Control*, 27, 503-531.
34. Chiarella, C. and X. He (2002), Heterogeneous beliefs, risk and learning in a simple asset pricing model. *Computational Economics* 19, 95-132.
35. Chiarella, C. and X. He (2001), Asset pricing and wealth dynamics under heterogeneous expectations, *Quantitative Finance*, 1, 509-526.

BOOK CHAPTERS (SELECTED)

1. Dieci, R., X. He and C. Hommes (2014), "Introduction" in Dieci, He and Hommes (eds.), *Nonlinear Economic Dynamics and Financial Modelling: Essays in Honour of Carl Chiarella*, Springer, p1-7.
2. He, X. (2013), "Recent developments in asset pricing with heterogeneous beliefs and adaptive behaviour of financial markets" in Gian Italo Bischi, Carl Chiarella and Iryna Sushko (eds), *Global analysis of dynamic models in economics and finance: Essays in honour of Laura Gardini*, Springer, Germany, p. 1-32.
3. He, X. and L. Shi (2011), *Diversification effect of heterogeneous beliefs*, In Herbert Dawid and Willi Semmler (Eds), *Computational Methods in Economic Dynamics*, 57-75, Springer.
4. Chiarella, C., R. Dieci and X. He (2010), *A framework for CAPM with heterogeneous beliefs*, In: Bischi, G.-I., C. Chiarella and L. Gardini (Eds.), *Nonlinear Dynamics in Economics, Finance and Social Sciences: Essays in Honour of John Barkley Rosser Jr.*, 353-369, Springer
5. Chiarella, C, R. Dieci and X. He (2009) *Heterogeneity, Market Mechanisms, and Asset Price Dynamics*, Book chapter for the ***Handbook of Financial Markets: Dynamics and Evolution***, Thorsten Hens and Klaus Reiner Schenk-Hoppe (Eds.), 277-344, Elsevier
6. Chiarella, C. and X He (2005), *An asset pricing model with adaptive heterogeneous agents and wealth effects*, *Nonlinear Dynamics and Heterogeneous Interacting Agents*, T. Lux, S. Reitz and E. Samanidou (Eds), *Lecture Notes in Economics and Mathematical Systems*, 550, 259-285, Springer.
7. Chiarella, C. and X. He (2004), *Dynamics of beliefs and learning under al-processes-the homogeneous case*, "Economic Complexity", W. Barnett, C. Deissenberg and G. Feichtinger (eds), *ISETE (International Symposium in Economic Theory and Econometrics) Series*, 14, 363-390, Elsevier.
8. Chiarella, C. and X. He (2000) *The dynamics of the cobweb when producers are risk averse learners*, *Optimization, Dynamics and Economic Analysis*, E.J. Dockner, R.F. Harl, M. Luptacik and G. Sorger (Eds), *Essays in Honor of Gustav Feichtinger*, 87-101, Physica-Verlag.

WORKING PAPERS (SELECTED)

1. He, X., K. Li and L. Shi (2016), Social interaction and asset pricing
2. He, X., K. Li and C. Wang (2016), Global dynamics, correlations and spill over effect under cross-sectional momentum trading.

3. He, X. and Li, Y. (2015), The adaptiveness in stock markets: testing the stylized facts in the DAX 30, Quantitative Finance Research Centre, University of Technology Sydney.
4. He, X., K. Li and Y. Li (2015), Optimal time series momentum and reversal, QFRC working paper 353.
5. Chu, L., X. He, K. Li and J. Tu (2015), Market sentiment and paradigm shifts in equity premium forecasting.

External Research Grants:

1. A New Paradigm of Financial Market Behaviour, C. Chiarella and X He, 2004-2006, \$260,000, Australian Research Council (**ARC Discovery Project**)
2. Dynamic Asset Pricing and Portfolio Decision Rules under Heterogeneous Expectations and Adaptive Learning in Continuous Time; X. He and C. Chiarella, 2007-2009, \$400,000, **ARC Discovery Project**
3. Double Auction Markets with Heterogeneous Boundedly Rational Traders, C. Chiarella and X He, 2011-2013, \$225,000, **ARC Discovery Project**
4. Asset Pricing with Social Interactions, Adaptive Learning, and Differences in Opinion, X. He, L. Shi and Y. Li, 2013-2015, \$211,000, **ARC Discovery Project**.
5. On the Dynamics of the Securities Market under Complex Information Environments: from Micro to Macro, Wei Zhang (CI, Tianjin, China) and X. He (CI, UTS), 2014-2018, CNY2,150,000, **National Natural Science Foundation of China** (NSFC, No71320107003)

Editorial Boards:

- Co-Editor, *Journal of Economic Dynamics and Control* (Since 2013)
- Associate Editor, *Journal of Economic Dynamics and Control* (2011-2012)
- Associate Editor, *Journal of Economic Interaction and Coordination* (Since 2011)
- Associate Editor, *Journal Differential Equations and Dynamical Systems* (Since 2011)