



# Michael Sigmund

## Curriculum Vitae

*I've always believed that if you put in the work, the results will come. (Michael Jordan)*

### Education

- 1999–2004 **Mag. rer. soc. oec.**, *Vienna University of Economics and Business Administration, Vienna, Special subjects.*  
Operations Research, Econometrics, International Finance, Industrial Management
- 2002 **Mag. rer. soc. oec.**, *University of Texas at Austin, Vienna, Foreign Exchange Student.*  
Money and Banking, Game Theory, International Finance
- 2004–2006 **Diploma in Economics**, *Institute for Advanced Studies, Vienna, Post-Graduate Program in Economics.*
- 2006–2008 **Dr. rer. soc. oec.**, *Vienna University of Economics and Business Administration, Vienna, Special subjects.*  
Labor market, game theory, bounded rationality, learning dynamics

### Master thesis

- title *Some applications of Game Theory in Social Sciences*  
supervisors Wolfgang E. Katzenberger

### Doctoral thesis

- title *A Game-theoretic Model of the Labor Market with integrated Search and Wage Dynamics*  
supervisors Hanns Abele, Klaus Pötzelberger

description This thesis deals with the design of a completely new model of the labor market in a partial equilibrium framework. The foundation of the model is the theory of repeated games in connection with the modern microeconomic concept of bounded rationality. The full model can explain theoretically the co-existence of structural and frictional unemployment, the co-existence of open vacancies and job seekers over a long period of time, the high persistence of unemployment and the gradual reduction of unemployment after various shocks, wage differences between industries, and a non degenerate wage distribution in equilibrium. On an aggregate level my model questions the fundamental principle of random matching which is the heart of many macroeconomic labor market models.

## Experience

### Vocational

- 2006–2007 **Scientific assistant**, *Vienna University of Economics and Business Administration*, Vienna.  
Substitute for o. Univ. Prof. DDr. Ulrich Berger at the Institute for Analytical Economics
- 2007 **Fixed Income Analyst**, *UniCredit CA IB*, Vienna.  
Investment Banker
- 2008–2016 **Senior Analyst**, *Oesterreichische Nationalbank*, Vienna.  
Financial Stability and Macroprudential Supervision Division
- 2017– **Senior Analyst**, *Oesterreichische Nationalbank*, Vienna.  
Foreign Research Division

## Languages

- German native language  
English full professional proficiency

## Computer skills

- Operating systems Good knowledge of *Windows XP, Windows 7, Windows 10 and Linux*
- Statistical programs Advanced knowledge of *R project (see Sigmund et al., 2016), Matlab, STATA, Eviews*
- Text processing Advanced knowledge of *Microsoft Word, Powerpoint, Excel and Latex*

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## Conferences

- **Surrey-Fordham Conference on Banking, Finance, Money and Institutions: The Post Crisis Era. (2013)** organized by the Centre for Money, Banking & Institutions (University of Surrey) and the Center for Research in Contemporary Finance (Fordham University) with Gunter et al. (2013).
- **Finance and Economics Conference (2013)** organized by the Lupcon Center for Business Research with Gunter et al. (2013).
- **RiskLab/BoF/ESRB Conference on Systemic Risk Analytics (2015)** with Siebenbrunner et al. (2017).
- **Tenth Financial Stability Christmas Seminar (2015) organized by the Central Bank of Slovakia** with Eidenberger et al. (2014b).
- **Risk in Financial Markets and Institutions: New challenges, New solutions (2016)** organized by the International Finance and Banking Society with Schmitz et al. (2017).
- **Portsmouth-Fordham Conference on Banking & Finance (2016)** organized by the Portsmouth Business School with Siebenbrunner et al. (2017).
- **European Finance and Banking Conference (2016)** organized by the University of Bologna with Schmitz et al. (2017).
- **Vietnam Symposium in Banking and Finance (2016)** organized by the Association of Vietnamese Scientists and Experts in France (AVSE), the International School of Vietnam National University (Hanoi), and the International Society for the Advancement of Financial Economics (ISAFE with Siebenbrunner et al. (2017) and Kerbl & Sigmund (2016).
- **Eleventh Financial Stability Christmas Seminar (2016) organized by the Central Bank of Slovakia** with Sigmund et al. (2017).
- **Fourth Research Workshop of the Task Force on Banking Analysis for Monetary Policy of the MPC (2017) organized by the ECB** with Kerbl & Sigmund (2016).
- **Conference on Computational Management Science (Pricing, Risk and Optimization in Management Science, 2017)** with Sigmund et al. (2016).
- **Risklab/Bank of Finland/ESRB Conference on Systemic Risk Analytics, 2017)** with Kerbl & Sigmund (2016).
- **40th International Panel Data Conference (IPDC, 2017)** with Sigmund et al. (2016).
- **33rd International Symposium on Money, Banking and Finance, annual meeting of the European Research Group (GdRE) on Money Banking and Finance (2017)** with Steininger & Sigmund (2017).
- **8th International Research Meeting in Business and Management (2017)** with Steininger & Sigmund (2017).
- **2nd Conference on Network Models and Stress Testing for Financial Stability (2017) organized by Banco de Mexico, the University of Zurich, the Bank of Canada and the Journal of Financial Stability** with Siebenbrunner & Sigmund (2017).

- o **Festival for New Economic Thinking (2017), Edinburgh Corn Exchange** with Steininger & Sigmund (2017).

## Teaching

- 2009–2017 **Joint Vienna Institute**, *Lectures on, Macroeconomic Credit Risk Modelling, Bank Solvency and Funding Costs, Profitability of the Banking Sector, Evaluation of systemic financial sector risks and CESEE exposure of Austria, Macroprudential Supervision – the key lesson from the crisis, Comparing market power at home and abroad: Evidence from Austrian banks and their subsidiaries in CESEE* .
- 2017 **Lauder Business School**, *Econometrics*, For the Master Program in Banking, Finance and Compliance.

## References

### Dr. Ingrid Stein

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Oesterreichische Nationalbank  
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### PhD Laura Valderrama

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## Publications

- Albacete, N., Eidenberger, J., Krenn, G., Lindner, P., & Sigmund, M. (2014). Risk bearing capacity of households – linking microlevel data to the macroprudential toolkit. *OeNB Financial Stability Report*, 27, 95–110.
- Alessi, L., Antunes, A., Babecký, J., Baltussen, S., Behn, M., Bonfim, D., Bush, O., Detken, C., Frost, J., Guimaraes, R., Havranek, T., Joy, M., Kauko, K., Matějů, J., Monteiro, N., Neudorfer, B., Peltonen, T., Rodrigues, P., Rusnak, M., Schudel, W., Sigmund, M., Stremmel, H., Smidkova, K., van Tilburg, R., Vašíček, B., & Zigràiova, D. (2015). *Comparing different early warning systems: Results from a horse race competition among members of the Macro-prudential Research Network*. Mpra paper, University Library of Munich, Germany.
- Cetina, J., Schmitz, S. W., Sigmund, M., & Valderrama, L. (2015). Making supervisory stress tests more macroprudential: Considering liquidity and solvency interactions and systemic risk. *BCBS Working Papers*, 29.
- Eidenberger, J., Liebeg, D., Schmitz, S. W., Seliger, R., Sigmund, M., Steiner, K., Strobl, P., &

- Ubl, E. (2014a). Macroprudential policy: A key lesson from the financial crisis. *OeNB Financial Stability Report*, 27, 83–94.
- Eidenberger, J., Neudorfer, B., Sigmund, M., & Stein, I. (2013). Quantifying Financial Stability in Austria - New Tools for Macroprudential Supervision. *OeNB Financial Stability Report*, 26, 62–81.
- Eidenberger, J., Neudorfer, B., Sigmund, M., & Stein, I. (2014b). What predicts financial (in)stability? a bayesian approach. *Deutsche Bundesbank Discussion Paper*, No. 36/2014.
- Feldkircher, M., Fenz, G., Ferstl, R., Krenn, G., Neudorfer, B., Pühr, C., Reininger, T., Schmitz, S. W., Schneider, M., Siebenbrunner, C., M., S., & Spitzer, R. (2013). Arnie in action: The 2013 fsap stress tests for the austrian banking system. *OeNB Financial Stability Report*, 26, 100–118.
- Feldkircher, M. & Sigmund, M. (2017). Comparing market power at home and abroad: Evidence from austrian banks and their subsidiaries in cese. *Focus on European Economic Integration*, Q3/2017, 59–77.
- Gunter, U., Krenn, G., & Sigmund, M. (2013). Macroeconomic, market and bank-specific determinants of the net interest margin in austria. *OeNB Financial Stability Report*, 25, 87–101.
- Hofmarcher, P., Kerbl, S., Gruen, B., Sigmund, M., & Hornik, K. (2014). Model uncertainty and aggregated default probabilities: new evidence from austria. *Applied Economics*, 46(8), 871–879.
- Kerbl, S. & Sigmund, M. (2009). Cyclicity of regulatory capital requirements: First evidence from austria. *OeNB Financial Stability Report*, 18, 97–106.
- Kerbl, S. & Sigmund, M. (2011). What drives aggregate credit risk? *OeNB Financial Stability Report*, 22, 77–92.
- Kerbl, S. & Sigmund, M. (2016). From low to negative rates: an asymmetric dilemma. *OeNB Financial Stability Report*, 32, 120–135.
- Neudorfer, B., Sigmund, M., & Trachta, A. (2011). Detecting financial stability vulnerabilities in due time: Can simple indicators identify a complex issue? *OeNB Financial Stability Report*, 22, 64–76.
- Pühr, C., Schwaiger, M., & Sigmund, M. (2009). Direct cross-border lending by austrian banks to eastern europe. *OeNB Financial Stability Report*, 17, 109–129.
- Pühr, C., Seliger, R., & Sigmund, M. (2012). Contagiousness and Vulnerability in the Austrian Interbank Market. *OeNB Financial Stability Report*, 24, 62–78.
- Schmitz, S. W., Sigmund, M., & Valderrama, L. (2017). Bank solvency and funding cost: New data and new results. *IMF Working Paper*, No. 17/116.
- Siebenbrunner, C. & Sigmund, M. (2017). *What drives prices in interbank markets*. Working paper.
- Siebenbrunner, C., Sigmund, M., & Kerbl, S. (2017). Can bank-specific variables predict contagion effects? *Quantitative Finance*, forthcoming.
- Sigmund, M. (2004). Game-theoretic applications in social sciences. Master's thesis, Vienna University of Economics and Business.

- Sigmund, M. (2008). *A Game-theoretic Model of the Labor Market with integrated Search and Wage Dynamics*. PhD thesis, Vienna University of Economics and Business, <http://epub.wu.ac.at/1858/1/document.pdf>.
- Sigmund, M., Ferstl, R., & Unterkofler, D. (2016). *Panel Vector Autoregression in R: The panel-var Package*. Working paper. [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2896087](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2896087).
- Sigmund, M., Gunter, U., & Krenn, G. (2017). How do macroeconomic and bank-specific variables influence profitability in the austrian banking sector? evidence from a panel vector autoregression analysis. *Economic Notes*, forthcoming.
- Sigmund, M. & Stein, I. (2017). What predicts financial (in)stability? a bayesian approach. *CREDIT AND CAPITAL MARKETS*, 3, 299–336.
- Steininger, L. & Sigmund, M. (2017). *Reciprocity in Bank Regulatory Reforms and Income Inequality: First Evidence from a Panel Vector Autoregression Analysis*. Working paper.