# Işıl Erol

## Curriculum Vitae

# **Personal**

Employment: Professor of Real Estate Finance

Faculty of Business, Department of International Finance

RICS Online Academy Trainer - Certificate in Property Finance and Investment

Academic Director of aA Real Estate Center

Özyeğin University Istanbul

Email: <u>isil.erol@ozyegin.edu.tr</u>

ORCID: orcid.org/0000-0001-8125-9118
Nationality: Turkish, Australian permanent resident

# Research Interests

Real estate finance (residential mortgages, option-based mortgage pricing, commercial real estate), Corporate finance (REITs, ESG investing), Housing economics.

## Education

Doctor of Philosophy (PhD) in Real Estate Finance, 2004, University of Cambridge, England. Master of Philosophy (MPhil) in Land Economy, 2001, University of Cambridge, England. Master of Science (MSc) in Economics, 2000, Middle East Technical University, Turkey. Bachelor of Science (BSc) in City and Regional Planning (Major in Urban Economics), 1998, Middle East Technical University, Turkey.

# Work Experience

Work Experience	
Professor of Real Estate Finance, Ozyegin University, Turkey	Aug 2022 – present
Academic Director, aA Retail Real Estate Centre, Ozyegin University	Aug 2022 – present
Program Director, MBA & Executive MBA at Graduade School of Business	Aug 2022 – Aug 2023
Associate Professor of Real Estate Finance and Investment, University of Reading	Mar. 2021–Aug 2022
Program Director, MSc Real Estate Finance, Henley Business School, University of R	eading 2021-2022
Associate Professor of Property Economics, Queensland University of Technology	Sept. 2018– Feb 2021
Discipline Leader, Property Economics, Queensland University of Technology	2018-2021
Professor of Real Estate Finance, Ozyegin University, Turkey	Jun 2017-Aug 2018
Academic Director, aA Retail Real Estate Centre, Ozyegin University	Nov 2013-Aug 2018
Associate Professor of Real Estate Finance, Ozyegin University	Sept 2013-Jun 2017
Vice Chair, Department of Economics, Middle East Technical University, Turkey	Feb 2011-Sept 2013
Associate Professor of Economics, Middle East Technical University	Jun 2010-Sept 2013
Visiting scholar, Business School, University of Adelaide, Australia	July/Sept 2009
Vice Director, Institute of Applied Mathematics, Middle East Technical University	Sept 2006-Aug 2008
Assistant Professor of Economics, Middle East Technical University	Jun 2005-May 2010

#### **Publications**

# Research Pipeline – Working papers & Submitted manuscripts.

Role of Housing in Driving Regional Wealth Inequalities in Britain, working paper.

The Value of Circular Economy in Corporate Real Estate: The Performance of REITs

#### **Published Articles**

Unal, U., Hayo, Bernd, and I. Erol (2024). The Effect of Immigration on the German Housing Market, *The Journal of Real Estate Finance and Economics*, <a href="https://doi.org/10.1007/s11146-024-09988-x">https://doi.org/10.1007/s11146-024-09988-x</a>

Unal, U., Hayo, Bernd, and I. Erol (2024). Housing Market Convergence: Evidence from Germany, *Applied Economics*, <a href="https://doi.org/10.1080/00036846.2024.2315094">https://doi.org/10.1080/00036846.2024.2315094</a>

Erol, I. and U. Unal (2023). Internal migration and house prices in Australia, *Regional Studies*, 57:7, 1207-1222, DOI: 10.1080/00343404.2022.2106363

Erol I., U. Unal, and Y. Coşkun (2023). ESG Investing and the Financial Performance: A Panel Data Analysis of Developed REIT Markets. *Environmental Science and Pollution Research*, 30, 85154–85169, https://doi.org/10.1007/s11356-023-28376-1

Adu-McVie, R., Yigitcanlar, T., Xia, B. and I. Erol (2023). How can innovation districts performance be assessed? Insights from South-East Queensland, Australia. *Journal of Place Management and Development*, 16 (2), 183-247. https://doi.org/10.1108/JPMD-06-2022-0053

Erol I. and U. Unal (2023). Local House Price Effects of Internal Migration in Queensland: Australia's Interstate Migration Capital. *Australian Economic Review*, 56(3), 308-327. <a href="https://doi.org/10.1111/1467-8462.12512">https://doi.org/10.1111/1467-8462.12512</a>

Adu-McVie, R., Yigitcanlar, T., Xia B. and I. Erol (2022). Innovation District Typology Classification via Performance Framework: Insights from Sydney, Melbourne, and Brisbane, *Buildings MDPI*, 12(9), 1398, https://doi.org/10.3390/buildings12091398.

Li, W., T. Yigitcanlar, A. Liu and I. Erol (2022). Mapping Two Decades of Smart Home Research: A Systematic Scientometric Analysis, *Technological Forecasting & Social Change*, 179, 121676.

Erol I. and U. Unal (2022). Employment effects of immigration to Germany in the period of migration policy liberalization, 2005–2018. *Eurasian Economic Review*, 12, 531–565. <a href="https://doi.org/10.1007/s40822-022-00199-4">https://doi.org/10.1007/s40822-022-00199-4</a>

Chia, J. and I. Erol (2021). Young Australians living with parents: free and pay board as popular housing tenure choices, *Journal of Housing and Built Environment*, <a href="https://doi.org/10.1007/s10901-021-09911-3">https://doi.org/10.1007/s10901-021-09911-3</a>

Li, W., T. Yigitcanlar, I. Erol and A. Liu (2021). Motivations, barriers and risks of smart home adoption: From systematic literature review to conceptual framework, *Energy Research & Social Science*, 80, 102211. https://doi.org/10.1016/j.erss.2021.102211.

Isler, O., T. Flew, I. Erol and U. Dulleck (2021). Market news and credibility cues improve house price predictions: An experiment on bounded rationality in real estate, *Journal of Behavioral and Experimental Finance*, 31, 100550.

Adu-McVie, R., Yigitcanlar, T., Erol, I. and Xia B. (December 2021) Classifying Innovation Districts: Delphi Validation of a Multidimensional Framework, *Land Use Policy*, 111, 105779.

Coskun, Y., I. Erol, and G. Morri. (2021) Why do Turkish REITs Trade at Discount to NAV? A Rational Approach Analysis, *Empirical Economics*, 60, 2227-2259.

Erol, I., D. Tirtiroglu, and E. Tirtiroglu (2020) Pricing of IPOs Under Legally Mandated Concentrated Ownership and Commitment Period: Evidence from a Natural Experiment for REITs in Turkey, *Journal of Behavioral and Experimental Finance*, 25, 100245.

Erol, I. and T. Tyvimaa (2020) Explaining the Premium to NAV in Publicly Traded Australian REITs, 2008 – 2018, *Journal of Property Investment & Finance*, 38(1), 4-30.

Sokalamis Adu Mcvie, R. Yigitcanlar, T. and I. Erol. (2020) How can contemporary innovation districts be classified? A systematic review of the literature, *Land Use Policy*, 95, 104595.

Erol, I. (2019) New Geographies of Residential Capitalism: Financialization of Turkish Housing Market Since the Early 2000s, *International Journal of Urban and Regional Research*, 43(4), 724-740.

Ceylan, R., B.A. Ozbakir and I. Erol (2017) A critical assessment of Retail Spaces and Shopping-Malls in Turkey through Legislative Frameworks, *METU Journal of Faculty of Architecture*.

Kutlukaya, M. and I. Erol (September 2016), Analysis of Cross-Country Variations in the Depth of European Mortgage Markets, *Journal of Housing and the Built Environment*, 31(3), 513-543

Cakici, N., Erol, I. & D. Tirtiroglu (March 2014), Tracking the Evolution of Idiosyncratic Risk and Cross-Sectional Expected Returns for US REITs, *Journal of Real Estate Finance and Economics*, 48(3), 415-440.

Erol, I. and B.A. Ozbakir (2012), Globalizing Polycentricity in Istanbul: Mamdani Type Fuzzy Rule-Based Model of Downtown Office Space Rents, *Urban Geography*, 33(8), 1212-1248.

Erol, I. and D. Tirtiroglu (July 2011), Concentrated Ownership, No Dividend Pay-out Requirement and Capital Structure of REITs: Evidence from Turkey, *Journal of Real Estate Finance and Economics*, 43(1-2), 174-204

Erol, I. and D. Tirtiroglu (2008), The Inflation-Hedging Properties of Turkish REITs, *Applied Economics*, 40(20), 2671-2696.

Erol, I. and K. Patel (2007), Pricing the Default Option of Inflation-Indexed Mortgages Using Explicit Finite Difference Method, *International Real Estate Review*, 10(1), 48-92.

Erol, I. and A. Güzel (2006), The Elasticity of Capital-Land Substitution in the Housing Construction Sector of a Rapidly Urbanized City: Evidence from Turkey, *Review of Urban and Regional Development Studies*, 18(2), 85-101.

Erol, I. and K. Patel (2005), Default Risk of Wage-Indexed Payment Mortgage (WIPM) Contract in Turkey, *Journal of Housing Economics*, 14(3), 271-293.

Erol, I. and K. Patel (2004), Housing Policy and Mortgage Finance in Turkey during the Late 1990s Inflationary Period, *International Real Estate Review*, 7(1), 98-120.

#### **Book Chapters**

Erol, I. (2019). Financial Transformation and Housing Finance in Turkey, in The Political Economy of Financial Transformation in Turkey, edited by Galip Yalman and Thomas Marois, Routledge Emerging Economies Series.

Bedirhanoğlu, P., Comert, H., Eren, I., Erol, I., Demiroz, D., Erdem, N., Gungen, A. R., Marois, T., Topal, A., Turel, O., Voyvoda, E., Yalman, G. and Yeldan, E. (2013) Comparative perspective on financial systems in the

EU: Country report on Turkey', FESSUD Studies in Financial Systems, no. 11, available online at: http://fessud.eu/wp-content/uploads/2012/08/Turkey-Studies.pdf (accessed 24 July 2017)

Erol, I. (2015). Real Estate and Economic Growth in Turkey in Real Estate, in Construction and Economic Development in Emerging Market Economies, edited by Raymond, T.A., O. Franklin, E. Ochieng and M. Vida, published by Routledge.

Erol, I. (Nisan 2015). Is there a Housing Boom in Turkey? An Analysis of Housing Market Capitalisation Rates, pages 323-344, in The Past, The Present, and The Future of Turkish Economy, edited by Emre Özçelik ve Erol Taymaz, Imge Publications, Ankara, ISBN 978-975-533-, 2015 (In Turkish).

## **Other Refereed Publications:**

Altinsoy, G., I. Erol and Ş.K. Yıldırak (2010), Time-varying Beta Risk of Turkish Real Estate Investment Trusts. *Metu Studies in Development*, 37 (August), 83-114.

Erol, I. and Ö. Çetinkaya (Aralık 2009), Originating Long-Term Fixed-Rate Mortgages In Developing Economies: New Evidence from Turkey. *Metu Studies in Development*, 36(2), 325-362.

Erol, I. (2009), US Mortgage Crisis and the Secondary Mortgage Market in Turkey (ABD Mortgage Krizi ve Türkiye'de İkincil Mortgage Piyasası), *Education Science Society Journal*, 7(27), 16-34.

Erol, I. (2008), The Inflation-Hedging Characteristics of Real Estate and Financial Assets in Turkey: 2000 to 2006, *Yapı Kredi Economic Review*, 19(1), 39-66.

Erol, I. and K. Patel (2007), Pricing the Default Option of Inflation-Indexed Mortgages Using Explicit Finite Difference Method, *International Real Estate Review*, 10(1), 48-92.

Erol, I. and A. Güzel (2006), The Elasticity of Capital-Land Substitution in the Housing Construction Sector of a Rapidly Urbanized City: Evidence from Turkey. *Review of Urban and Regional Development Studies*, 18(2), 85-101.

Erol, I. and K. Patel (2005), Developing Mortgage Market in Turkey: The Key Issues in the Creation of Secondary Market. *Bogazici Journal: Review of Social, Economic and Administrative Studies*, 19(1-2), 31-54.

Erol, I. and K. Patel (2004), Housing Policy and Mortgage Finance in Turkey during the Late 1990s Inflationary Period. *International Real Estate Review*, 7(1), 98-120.

#### **Non-Academic, Sectoral Publications**

Erol, I. (September 23, 2016). Ekonomik Büyüme ve Sürdürülebilir Gayrimenkul Piyasaları, Gayrimenkul Türkiye Dergisi

Erol, I. (August 05, 2016). Ev Sahipleri ve Kiracıların Konutta Oturma Sürekliliğini Belirleyen Faktörler, Gayrimenkul Türkiye Dergisi

Erol, I. (September 2014). Türkiye Geneli ve İller Bazında Konut Satışları: 1998-2013 Dönemi, Marketing Anadolu Dergisi, Sayfa 40-41.

# **International Conference Proceedings**

Erol, I. (2008). Capital Structure Decisions in Turkish REITs. Proceedings of the 13th Asian Real Estate Society (AsRES) Annual Conference, Shanghai-China, ISBN 978-7-5642-0263-7, July 12-15, 2008.

Baer, T., K. Patel, I. Erol, R. Pereira, & Y. Sung-Jin (2006). Pricing of Reverse Mortgage on Forward House Sale. Proceedings of the 5th International Conference on Computational Intelligence in Economics and Finance) October 8-11, 2006, Taiwan ISBN: 978-90-78677-01-7.

# Research Projects

Project title: A Regional Analysis of Housing-Wealth Inequality Dynamics in Britain, October 2021 – September 2023, funded by the Reading Real Estate Foundation, Lead researcher.

Project title: Effect of International Migration on Local House Price Dynamics in Germany', funded by the Department of Economics, University of Marburg, Researcher.

Project title: Operationalising Knowledge-Based Urban Development in Papua New Guinea in the Case of Malahang Industrial Innovation Centre, 2019-2021, funded by Papua New Guinea University of Technology. Working as the Project Co-investigator in a QUT team of three researchers.

World Bank Research Project: Urban Transformation in Turkey and Financing Urban Transformation Projects (UTPs) with Case Studies from Istanbul, November 2017 to June 30, 2018. Worked as a local consultant.

The Scientific and Technological Research Council of Turkey Project: Economic Impacts of Transportation Policies: A Case Study for Turkey at the City Level, October 2017 – October 2019. Worked as the Project Co-Investigator.

The Scientific and Technological Research Council of Turkey Project: Analysis of the Determinants of Declining Home Ownership Rate in Turkey, 2015–2016. Worked as the Project Chief Investigator.

European Union (EU), European Commission Seventh Framework Program Project (FP7/2007-2013): FESSUD: Financialization, Economy, Society and Sustainable Development, December 2011–December 2014. Worked as a Researcher in a team of fifteen participating international universities.

The Scientific and Technological Research Council of Turkey Project: Pricing Turkish REIT Industry under the Corporate Finance Theories: Applications of Arbitrage Pricing Model and Event Study for Tax Arbitrage, November 2011-November 2012. Worked as the Project Chief Investigator.

The Scientific and Technological Research Council of Turkey Project: GIS and Fuzzy Logic Based Spatial Analysis for the Determinants of REIT-Owned Commercial Property Rents in Istanbul, October 2008-2010. Worked as the Project Chief Investigator.

The Scientific and Technological Research Council of Turkey Project: Pricing Fixed Rate Mortgages in Inflationary Economies: A Numerical Analysis of Partial Integro Differential Equation (PIDE) for jump processes, October 2007-2009, \$31,520. Worked as the Project Chief Investigator.

#### **Industry-Led Research Projects**

Project Title: House Price Index Construction for Istanbul, June 2016 – June 2017, funded by EmlakJet Company. Worked as the Project Leader and Consultant in a research team of five researchers.

Project title: Primary and Secondary Mortgage Markets and Pricing Mortgage Contracts in Turkey, June-December 2009 & February-June 2010 funded by Is Bank. Worked as the Project Chief Investigator & Consultant. [One-year training program on 'Pricing mortgage contracts and the development of secondary mortgage market in Turkey' for over 4,000 Is Bank employees].

# Executive Training & Professional Teaching

Real Estate Foundations Course, Graduate Development Program (GDP) for the Public Investment Fund (PIF) of Saudi Arabia, Trainer for Kaplan Professional Middle East, 14-25 April 2024.

The Royal Institution of Chartered Surveyors (RICS) London Online Academy Trainer for Property Investment and Finance Track, December 2022 – present.

Executive training for the real estate analysts in the Public Investment Fund of Saudi Arabia as RICS Trainer, 10-17 April 2023.

The Association of Turkish Real Estate Investment Companies (GYODER) & Ozyegin University aA Retail and Real Estate Centre, Real Estate Development and Financing Certificate Program for Industry Professionals, Real Estate Markets at the Global Scale and the Role of Real Estate Investments in Institutional Investor Portfolios, 2 November 2016.

Turkcell Real Estate Group, Real Estate Management Certificate Program, Introduction to Real Estate Economics and Finance lecture, August 26-27, 2016.

Turkey Real Estate Appraisers Association (TDUB) Academy – Real Estate Economics and Finance lecture, January 23, 2016.

Turkey Real Estate Appraisers Association (TDUB) Academy – Real Estate Economics and Finance lecture, November 23, 2015.

Finans Bank, one-day teaching on Fundamentals of Real Estate Markets, October 10, 2015.

Is Bank, one-year training program on 'Pricing mortgage contracts and the development of secondary mortgage market in Turkey' for over 4,000 Is Bank employees.

# **Graduate Advising, Masters and PhD Thesis Supervisions**

I have supervised several MSc/PhD theses, graduate projects, and served as external thesis advisor.

# **Ongoing Theses**

Özyeğin University, Graduate School of Business, PhD in Finance, "Executive Team Overconfidence for US REITs" by Neslihan Yılmaz, ongoing PhD thesis, Principal supervisor.

#### **Completed Theses**

Henley Business School, Real Estate and Planning Department, University of Reading, "Unique Property Buyers and Their Impact on the UK Housing Market" by Cornelia Agyenim-Boateng, ongoing PhD thesis, Principal supervisor.

School of Economics and Finance & School of Built Environment, Queensland University of Technology (QUT), "A Methodology for Developing Innovation District Typologies: The Case of South-East Queensland", by Rosemary Sokalamis Adu Mcvie, ongoing PhD thesis, Co-supervisor.

Master's Thesis – School of Economics and Finance & School of Built Environment, Queensland University of Technology (QUT), "Demographics of Smart Homes and Smart Cities in Australia", by Wenda Li, May 2022, External supervisor.

PhD Thesis – Department of Economics, Middle East Technical University (METU), "Turkish Mortgage Market: An Assessment of Its Potential and Riskiness", by Mahmut Kutlukaya, April 2015, Sole supervisor.

PhD Thesis – Department of Economics, Middle East Technical University (METU), "The Impacts of the Structural Differences of Turkish REITs from the Global REIT Industry", by Erkan Yönder, February 2015, Sole supervisor.

PhD Thesis – Department of Economics, Middle East Technical University (METU), "Transport Economics: Congestion Charging by Spatial Computable General Equilibrium (CGE) Models", by Ozhan Yılmaz, August 2018, Co-supervisor.

Master's Thesis – Department of City and Regional Planning, Yildiz Technical University, Istanbul, "Analysing the Performance of Shopping Centres in Mixed-Use Real Estate Projects within the Sustainability Perspective: The Case of Istanbul", by Rumeysa Ceylan, July 2016, Co-supervisor.

Master's Thesis – Department of Financial Mathematics, Institute of Applied Mathematics, Middle East Technical University (METU), "Pricing Default and Financial Distress Risks in Foreign Currency-Denominated Corporate Loans in Turkey", by Aycan Yilmaz, September 2011, Sole supervisor.

Master's Thesis – Department of Financial Mathematics, Institute of Applied Mathematics, METU, "Completion, Pricing and Calibration in a Levy Market Model", by B. Zeynep Yılmaz, September 2010, Cosupervisor.

Master's Thesis – Department of Financial Mathematics, Institute of Applied Mathematics, METU, "Office Rent Variation in Istanbul CBD: An Application of Mamdani and TSK-Type Fuzzy Rule Based System", by Azar Karimov, August 2010, Principal supervisor.

Master's Thesis – Department of Economics, METU, "Time-Varying Beta Risk of Turkish REITs", by Gozde Altınsoy, December 2009, Sole supervisor.

Master's Thesis – Department of Economics, METU, "The determinants of financial development in Turkey: A principal component analysis", by Mesrur Boru, August 2009, Sole supervisor.

Master's Thesis – Department of Financial Mathematics, Institute of Applied Mathematics, METU, "Pricing the Default and Prepayment Risk of Fixed Rate Mortgages in Turkey: An Application of Explicit Finite Difference Method", by Ozgenay Cetinkaya, July 2009, Sole supervisor.

Master's Thesis – Department of Financial Mathematics, Institute of Applied Mathematics, METU, "Financial Leverage Decisions of Turkish REITs" by Burak Yıldırım, December 2008, Sole supervisor.

### **Teaching Portfolio**

At Henley Business School I have taught three graduate courses in the MSc Real Estate Finance Program: REMB38B Real Estate Funding; REMF57 (Real Estate Finance); and REMF43 (Global Real Estate Markets and Investments).

During my academic position at Queensland University of Technology, from 2018 to 2021 (February), I have taught two real estate finance units in the Bachelor of Property Economics Program: USB245 (Property Investment Analysis) and USB247 (Real Estate Finance).

During my academic position at Ozyegin University Business School, from 2013 to 2018, I have taught undergraduate courses in finance, corporate finance, and financial derivatives (FIN 202, FIN 302, FIN411), masters courses in real estate finance and investment (MGMT 770, FERM 537), and a doctoral course on corporate finance (FIN 802).

FIN 202: Finance (Undergraduate Program)

FIN 302: Corporate Finance (Undergraduate Program)

FIN 411: Financial Derivatives and Risk management (Undergraduate Program)

MGMT 770: Real Estate Finance (MBA Program)

FERM 537: Real Estate Investment with Real Options (Financial Engineering and Risk Management Program)

FIN 901: Corporate Finance (PhD Program).

During my visiting scholar position in the Business School, University of Adelaide I have taught half of the CORFIN 7020 – Options, Futures and Risk Management course.

During my academic position in the Department of Economics at the Middle East Technical University (METU), from 2005 to 2013, I have taught undergraduate courses in Introduction to Microeconomics,

Microeconomic Theory, Introduction to Statistics, Principles of Finance, Real Estate Economics, Investment Analysis with Real Options. Additionally, I have taught a PhD course in Financial Theory and Corporate Policy.

# **Honours and Scholarships**

2001-2003:	Bill Gates - Cambridge Scholarship for the PhD Degree at the University of Cambridge.
2001-2003:	Overseas Research Scholarship (ORS), Universities UK, Department of Education and Skills for the PhD Degree at the University of Cambridge.
2000-2001:	British Chevening and Turkish Education Foundation (TEV) Scholarship for the MPhil Degree at the University of Cambridge.
1993-1998:	Honour award for ranking 3rd in the Department of City and Regional Planning, Middle East Technical University.