

Advanced Topics in Finance: Part II

Real Estate Finance

Course Outline: Fall Term 2023

Contact Information

Lecturer: **Roland Füß**

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Course Description

This course focuses on real estate decision making in the private sector, using tools from finance and economics. It aims to provide a comprehensive overview of the main concepts in real estate finance and investments. To understand the risks and rewards associated with investing and financing of residential and commercial real estate, the course considers primary valuation techniques, investment appraisal, and the importance of financing structure. There will be also an extensive discussion of current developments in the real estate sector, such as sustainability and green investing. After completion, students will be able to make and evaluate real estate finance and investment decisions.

Content

1. Introduction to Real Estate Markets (Thu 11/02/2023)

(Real Estate Economics, DiPasquale-Wheaton Model, The Real Estate System, Real Estate Market Analysis, Real Estate Cycles, Real Estate Bubbles)

Literature:

DiPasquale, D., and W.C. Wheaton (1996): *Urban Economics and Real Estate Markets*, New Jersey: Prentice Hall, **Chapter 1**.

Geltner, D.M., N.G. Miller, J. Clayton, and P. Eichholtz (2013): *Commercial Real Estate: Analysis and Investments*, 3rd ed., Mason, OH: South-Western Publishing/Thomson Learning, **Chapters 1, 2, and 6**.

2. Real Estate Valuation (Thu 11/02/2023)

(Valuation Fundamentals, Sales Comparison Approach, Income Capitalization Approach, Cost Approach)

Literature:

Brueggeman, W.B., and J.D. Fisher (2022), *Real Estate Finance and Investments*, 17th ed., McGrawHill: Boston et al., **Chapters 3 and 10**.

Geltner, D.M., N.G. Miller, J. Clayton, and P. Eichholtz (2013): *Commercial Real Estate: Analysis and Investments*, 3rd ed., Mason, OH: South-Western Publishing/Thomson Learning, **Chapters 8, 10, and 11**.

Plazzi, A., W. Torous, and R. Valkanov (2010), Expected Returns and Expected Growth in Rents of Commercial Real Estate, *Review of Financial Studies* 23(9), 3469-3519.

3. Mortgage Loans and Secondary Mortgage Markets (Fri 11/03/2023)

(Fixed Interest Rate Mortgage Loans, Adjustable and Floating Rate Mortgage Loans, Loan Amortization Patterns, Risk Premiums, Interest Rate Risk, and Default Risk, Mortgage Backed Securities (MBS), Collateralized Mortgage Obligations (CMOs), Floater (F) and Inverse Floater (IF) Tranches, Commercial Mortgage Backed Securities (CMBS), Collateralized Debt Obligations (CDOs))

Literature:

Brueggeman, W.B., and J.D. Fisher (2022), Real Estate Finance and Investments, 17th ed., New York: McGraw-Hill, **Chapters 4, 5, 6, and 20.**

Campbell, J., and J. Cocco. (2003). Household Risk Management and Optimal Mortgage Choice. *Quarterly Journal of Economics* 118, 1449-1494.

Geltner, D., N.G. Miller, J. Clayton, and P. Eichholtz (2013), Commercial Real Estate Analysis and Investments, 3rd ed., Mason, OH: South-Western Publishing/Thomson Learning, **Chapters 16, 17, 18, and 19.**

4. Incoming-Producing Properties (Fri 11/03/2023)

(Supply and Demand Analysis, Income Potential, Effective Rent, Pro Forma Statements of Cash Flow)

Literature:

Brueggeman, W.B., and J.D. Fisher (2022), Real Estate Finance and Investments, 17th ed., New York: McGraw-Hill, **Chapter 9.**

5. Case Study Presentation (Wed 11/22/2023)

6. Real Estate Indices (Wed 11/23/2023)

(Direct Real Estate Investments, Hedonic Regression, Repeat Sales Regression)

Literature:

Brooks, C. (2008): Introductory Econometrics for Finance, 2nd ed., **Chapter 10.**

Geltner, D, and D.C. Ling (2006), Considerations in the Design and Construction of Investment Real Estate Research Indices.

Geltner, D., N.G. Miller, J. Clayton, and P. Eichholtz (2013), Commercial Real Estate Analysis and Investments, 3rd ed., Mason, OH: South-Western Publishing/Thomson Learning, **Chapters 9 and 25, Appendix 12A.**

Malpezzi S. (2002) Hedonic Pricing Models: A Selective and Applied Review, prepared for Housing Economics: Essays in Honor of Duncan MacLennan, <http://www.bus.wisc.edu/realestate>.

Rosen, S. (1974) Hedonic Prices and Implicit Markets: Product Differentiation in Pure Competition, in: *Journal of Political Economy*, Vol. 82, S. 34-55.

7. Real Estate Portfolio Management

(Wed 11/23/2023)

(Indirect Real Estate Investments, Real Estate Investments Trusts, Real Estate Private Equity, Real Estate Derivatives)

Literature:

Brueggeman, W.B., and J.D. Fisher (2022), *Real Estate Finance and Investments*, 17th ed., New York: McGraw-Hill, **Chapter 21, 22, and 23.**

Eichholtz, P., N. Gugler, and N. Kok (2011): Transparency, Integration, and the Cost of International Real Estate Investments, *Journal of Real Estate Finance and Economics* 43(1-2), 152-173.

Fabozzi, F.J., R.J. Shiller, and R.S. Tunaru (2010): Property Derivatives for Managing European Real-Estate Risk, *European Financial Management*, 16(1), 8-26.

Geltner, D.M., N.G. Miller, J. Clayton, and P. Eichholtz (2013): *Commercial Real Estate: Analysis and Investments*, 3rd ed., Mason, OH: South-Western Publishing/Thomson Learning, **Chapters 21, 24, and 26.**

Morawski, J., R. Füss, and H. Rehkugler (2008): The Nature of Listed Real Estate Companies: Property or Equity Market?, *Financial Markets and Portfolio Management* 22(2), 101-126.

8. Real Estate Sustainability

(Wed 11/24/2023)

(Climate Risk and Real Estate, Economics of Green Buildings, International Rating Systems, Financial Implications of Green Buildings, ESG and Real Estate, CO2 Benchmarking)

Literature:

Brounen, D., and N. Kok (2011): On the Economics of Energy Labels in the Housing Market, *Journal of Environmental Economics and Management* 62, 166-179.

Eichholtz, P., N. Kok, and J. Quigley (2010): Doing Well by Doing Good? Green Building Office Building, *American Economic Review* 100(5), 2492-2509.

Reichardt, A., F. Fuerst, N.B. Rottke, and J. Zietz (2012): Sustainable Building Certification and the Rent Premium: A Panel Data Approach, *Journal of Real Estate Research* 34(1), 99-126.

Literature – Recommended Readings:

Brown, G.R., and G.A. Matysiak (2000): *Real Estate Investment – A Capital Market Approach*, Harlow, UK: Financial Times/Prentice-Hall.

Brueggeman, W.B., and J.D. Fisher (2022): *Real Estate Finance and Investments*, 17th ed., Boston MA: McGraw-Hill.

DiPasquale, D., and W.C. Wheaton (1996): *Urban Economics and Real Estate Markets*, Harlow UK: Prentice-Hall.

Geltner, D., N.G. Miller, J. Clayton, and P. Eichholtz (2013): *Commercial Real Estate Analysis and Investments*, 3rd ed., Mason, OH: South-Western Publishing/Thomson Learning.