SUPPLEMENT TO "RATIONAL BUBBLES IN UK HOUSING MARKETS: COMMENT ON "NO-BUBBLE CONDITION: MODEL-FREE TESTS IN HOUSING MARKETS""

DAVID DOMEIJ
Department of Economics, Stockholm School of Economics

TORE ELLINGSEN
Department of Economics, Stockholm School of Economics

The supplement contains two appendices. Appendix 1 describes the details of a typical leasehold enfranchisement court case. Appendix 2 describes an online facility that computes the expected cost facing a leaseholder seeking to enfranchise.

APPENDIX 1: A TYPICAL CASE

THE CASE CONCERNS THE PROPERTY 9 & 9a Renmuir Street, London SW17 9SR, decided 4 April 2016; please see the copy of the court record below.

For the freehold on the ground-floor flat, the court decides that the leaseholder pays 860 pounds, which corresponds to the net present value of ground rents.[1] Since $v/1.05^{989}$ is negligible regardless of the exact value of v, the court does not bother to value the vacant possession of the ground-floor flat. By contrast, the first-floor flat has a shorter lease, running for 125 years, starting from 29 September 2002, and a somewhat higher ground rent, with a net present value of 2041 pounds. Since the time to expiration is shorter, the value of vacant possession is significantly greater than zero: The value v is estimated at 395,000 pounds. The discount factor corresponding to 112.4 years is $1/1.05^{112.4} \approx 0.00415$. Thus, the present value of reversion for the first-floor flat is estimated as 1619 pounds.[2] If there was a rational bubble in London's real estate market in 2016, the leaseholders obtained the bubble on the ground-floor price for free. They obtained the bubble on the first-floor price at rebate of about 99.6 percent.

David Domeij: david.domeij@hhs.se

Tore Ellingsen: tore.ellingsen@hhs.se

[1]The ground rent is the contracted rental payment from the leaseholder to the landlord. It is typically specified per year. In the present case, the discount rate applied when computing the net present value of the ground rent is 7 percent, following the tradition of discounting these more heavily than the reversion. This makes sense, because stipulated ground rents typically grow over time.

[2]Presumably, (i) the time to expiration exceeds 112 years because the calculation was performed in 2015 and not in 2016 when the decision was made, and (ii) a minor rounding error is responsible for the discrepancy between the correct amount 1640 and the estimate 1619.

APPENDIX 2: Freehold Calculator

The picture below is a screenshot from https://www.freeholdcalculator.com. We input a leasehold whose current value is GBP 500,000. We input an annual ground rent of 0 in order to focus cleanly on the value of the possession right at leasehold expiration. The calculator itself then reports the "relativity" of 100, revealing that the calculator's constructor considers it evident that the market value of long leaseholds equals the market value of corresponding freeholds (which is GMS's empirical finding). The calculator allows different discount rates for ground rents and reversion. Clicking on the question mark next to the reversion rate reveals a text box, where the *Sportelli* case is cited in support of the 5% default reversion rate. As can be seen, the calculator correctly computes the costs of the freehold purchase to be 0.

Co-editor Joel Sobel handled this manuscript.