

The effects of flood events on land and housing value: Evidence from the Swiss real estate market *

Stephanie Armbruster,[†] Beat Hintermann[‡] and Andreas Zischg[§]

March 6, 2018

Work in progress: Preliminary and incomplete. Please do not cite.

Abstract

If homeowners are fully rational and well aware of flood risks and related cost, there should be a reduction in land and housing values from a risky floodplain location. Previous research has indicated that price differentials reflecting the risk of flooding exist, but that they become much larger in the wake of a storm. This suggests that households may suffer from availability bias such that risks become more salient to buyers and sellers in the wake of a major flood. We apply a hedonic price model to Geographic Information System data on housing and land prices in Switzerland, combined with flood hazard maps and investigate the effect of the biggest floods of 2007, 2013 and 2015 on housing and land prices. Despite the presence of socialized insurance mandate for buildings we find evidence for a persistent availability bias. We further find that the introduction of flood hazard maps into legally binding land use plans increases property prices.

Keywords: *Flood risk, housing values, hedonic pricing, environmental amenities, availability bias*

*This research has been supported by the Swiss National Science Foundation under grant Nr. CRSII1-154404 (Sinergia).

[†]University of Basel, Peter-Merian-Weg 6, CH-4002 Basel, CH. stephanie.armbruster@unibas.ch

[‡]University of Basel, Peter-Merian-Weg 6, CH-4002 Basel, CH. b.hintermann@unibas.ch

[§]University of Bern, Institute of Geography, Oeschger Centre for Climate Change Research, Mobiliar Lab for Natural Risks, Hallerstrasse 12, CH-3012 Bern, Switzerland andreas.zischg@giub.unibe.ch