An Assessment of the National Flood Insurance Program’s (NFIP) Community Rating System (CRS)

Executive Summary

In theory insurance can be a powerful mechanism to incentivize people living in harm’s way to invest in risk reduction measures by offering them lower premiums and if they do so; it can also reduce moral hazard if this investment in risk reduction is occurring in tandem with insurance. This argument has been made in a number of academic contributions over the years. In reality though, and somewhat vexing, this link between residential flood insurance premium setting and investment in risk reduction measures is non-existent in most countries. In a recent review of residential flood insurance markets in more than 20 OECD countries Atreya et al. 2014 show that this insurance-mitigation link might exist anecdotally, but is rarely implemented nationally in practice. In fact of all the countries they studied, only the United States has a national program that links insurance to mitigation via the Community Rating System (CRS) managed by the US National Flood Insurance Program (NFIP) under the Federal Emergency Management Agency (FEMA). The NFIP is the primary source of flood insurance in the US and covers $1.25 trillion in asset today.

A CRS participating community can choose to invest time and energy in one or more of the 19 flood management activities recognized by FEMA. For each activity the community undertakes, and depending on the level of achievement within that activity, the community obtains points. The more points, the better the community is scored (from 10 to 1, 10 being the lowest and 1 the highest). The better the score, the more rebate residents in that community will receive on their NFIP flood insurance premiums. Premium discounts of up to 45 percent correspond to points accrued by each community depending on the degree to which the community performs mitigation activities against the risk of flood.

With an access to the entire dataset of the CRS from FEMA, first we perform a longitudinal analysis of all participating CRS communities over a period of 15 years (1998-2012) to answer some basic yet important questions such as: How does the distribution of communities look like across all CRS activities? Do the communities improve their CRS classes over time? How long does it take for CRS communities to move up in class? What’s the tenure in the CRS? Do many communities drop their participation after just a few years in a similar way that many residents drop their flood insurance coverage after just three of four years (Michel-Kerjan et al, 2012)? Overall we find that the CRS program works well. It keeps attracting more communities every year; the tenure is very high with 99% of participation communities remaining in the program from year to year. The distribution of scores across all communities has also improved overtime; the average number of activities communities are involved in increased by 20% between 1998 and 2012 (from 10 to 12, out of 18 possible ones). There are positive moves within activities as well.

Although a great incentive program and the participating communities performing well, out of the 22,000 NFIP communities in the United States only 1200 communities participate in the
CRS program which is surprising. In order to explore the triggers and obstacles faced when deciding to join the CRS we interviewed few CRS coordinators in the US. According to most of the CRS coordinators one of the biggest triggers to join the program was the insurance premium discount. For others a recent hurricane or major flood event, having creditable activities already in place and just a matter of reporting them formally and the lead from their neighboring communities were the greatest triggers to join CRS. In regard to the obstacles, funding, especially for capital improvement plans, convincing management and city mayors about the benefits of CRS, educational challenges such as not knowing what gets them the credit and convincing the non-transient community never hit by a flood to participate were the main challenges. In this paper we further intend to statistically test whether the triggers and obstacles stated by the officials are the true drivers of CRS participation. Additionally, we also plan to test the levels of community involvement in the CRS as it relates to the NFIP policies.