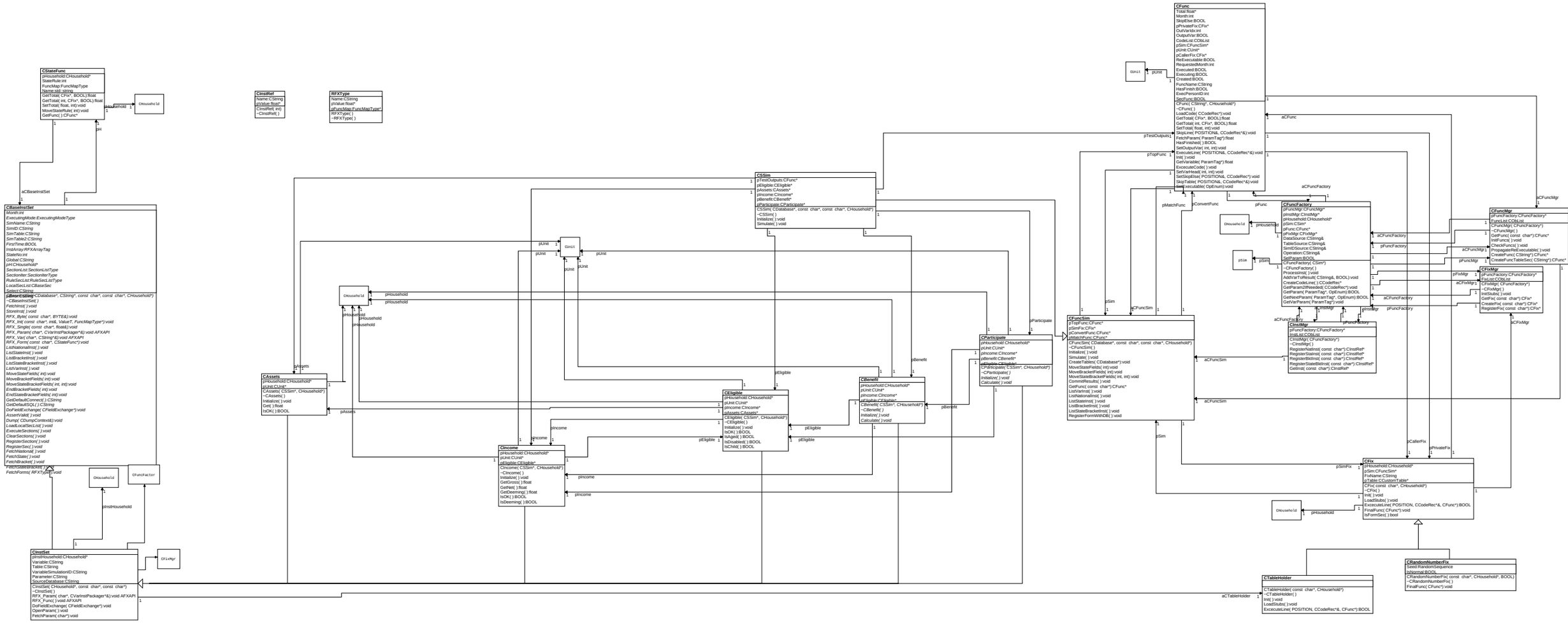func, ssim, inst, and baseinst