- The state variables are $(a, z_1, z_2, e, \theta, j)$, where z_1 and z_2 are two exogenous states (Markov), e is iid exogenous state, θ is permanent type, j is age.
- The shock $z_2 \in \{1, 2\}$ (sick vs healthy) is age-dependent and type-dependent.
- Let the distribution be denoted as μ.
- Average assets a, conditional on health status being sick (i.e. $z_2 = 1$)

$$E\left[a|z_2 = 1\right] = \frac{\sum_{a,z_1,e,\theta,j} a \times \mu\left(a, z_1, 1, e, \theta, j\right)}{\sum_{a,z_1,e,\theta,j} \mu\left(a, z_1, 1, e, \theta, j\right)}$$

- Note that the denominator in the expression above denotes the share of sick people in the population.
- In the toolkit, $E\left[a|z_2 = 1\right]$ is given by `AllStats.sick.assets.Mean`