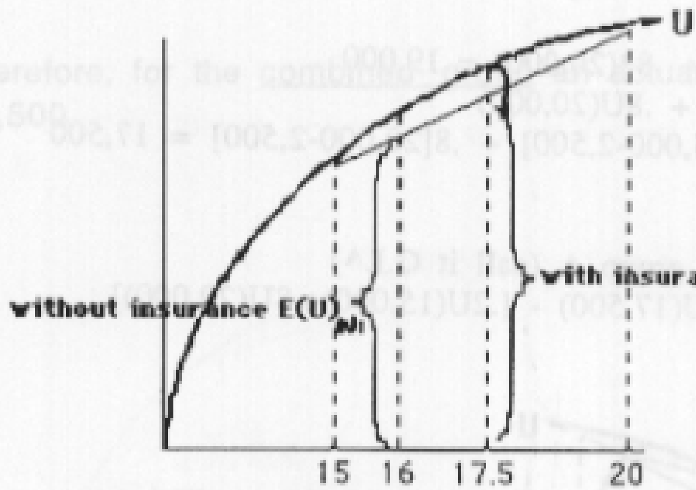

It is clear that group B has a large net gain from taking insurance; it gains them a certain income larger than their expected income without insurance.

If in fact group A does not take the insurance, then the actual risk pool will reflect group B's experience. In this case the actuarity fair premium would be $4,000. Thus the insurance company which offered the policy in expectation of experience reflecting the combined group's loss experience would suffer a substantial loss: it's aggregate compensation to those ill would exceed by far the premiums it received.

Adverse Selection

A situation such as that just described can arise when the insurer cannot adjust the premium adequately to the characteristics of each group because she does not have adequate information on which to differentiate members of group A from those of group B and adjust premiums accordingly. This is referred to as adverse selection: members of the group with high risk are (self) selected into the insurance pool, while members with low risk (self) select themselves out of the pool and the result is an adverse experience of compensation payments in excess of premiums.