The implement of Cost allocation Problems by Bankruptcy Approach

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Cost allocation problems arise in many real life situations, where individuals decide to work together in order to save costs. In these situations the problem arises how to divide among the participants the joint costs which result from the cooperation. The Tennessee Valley Authority (TVA) studied how to allocate the costs of multipurpose water projects in the 1930's. The methods proposed by the TVA are all based on separable cost. We aim to study the implement of cost allocation problems by Bankruptcy approach.   We convert the cost allocation problem to the induced bankruptcy version through a reasonable restricted condition to separable cost. Then the relationships between bankruptcy rules and cost allocation methods based on separable cost are revealed. These give new interpretation of separable cost allocation method.