This paper investigates the determinants of poverty entry and exit of the old-age population in eleven European countries using the European Community Household Panel (1994-2001). Adopting an approach which has become standard in the econometric literature on poverty dynamics, I use a multivariate piece-wise constant discrete-time hazard model to estimate the major determinants of the hazard of both poverty entry and exit for the population in retirement age compared with the working age population, and by taking into account individual unobserved heterogeneity. The methodology enables to assess the impact of personal characteristics, household characteristics, and other labour market factors on individuals’ probability to leave and to enter poverty, and to make predictions about the mean durations of poverty spells for specific population subgroups in different countries. Particular attention has been devoted to investigate how changes in households’ disposable income composition after retirement and life-time changes impact on poverty spells. The main results show that widowhood and living in single-person households are among the major factors decreasing the hazard of leaving poverty in all the countries considered. Further, the employment status of other household members is another key factor for insuring the elderly against the risk of poverty, in particular in Ireland and Southern European Countries. A pooled estimation across countries of the hazard of entering and leaving poverty has also been pursued, using indicators of social expenditure and of old-age relevant social protection reforms during the late 1990s to identify country fixed effects.