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## Discounted Moments of Surplus after the Last Innovation before Ruin under the Dual Risk Model

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Our research's focus is on finding an explicit form of the discounted moments of the surplus at the time of the last jump before ruin for the compound Poisson dual risk model. For this purpose, we derive a non-homogeneous integro-differential equation which is satisfied by the targeted quantity. To solve this equation, the general solution of the corresponding homogeneous equation and a particular solution of the non-homogeneous equation are obtained. Also, some additional results are provided, such as the defective distribution of the time to ruin and the Laplace transform of the time when the last jump before ruin happens.