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In this work we consider the joint distribution of drawdowns and drawups of Brownian motion with positive and negative drift respectively. The drawdown is defined as the first time that the current drop of the process from the running maximum reaches a certain threshold while the drawup is defined as the first time that the current rise of the process from the running minimum. In particular we demonstrate that it is possible to write the joint Laplace transform of the drawdown when the drawdown precedes the drawup as a ratio of the Laplace transforms of each of the individual Laplace transforms of the drawdown and the drawup respectively. Using this decomposition we investigate the cases in which it is possible to express the joint distribution of drawdowns and drawups in terms of the joint distribution of first hitting times to upper and lower thresholds. We discuss the usefulness of this decomposition to sequential statistics and financial risk management. (Received September 21, 2010)