

The purpose of this thesis is to analyze the market dynamics in periods following a large financial shock. In order to do so, we compute the cumulative number of times the volatility is greater than a given threshold. Such a method is analogous to Omori's law from geophysics. We draw statistical evidence from three different events. The first one is concerned with the death of Steve Jobs and how it affected the evolution of Apple's share price. The second one focuses on the Flash Crash of 2010 when the Dow Jones Industrial Average experienced the largest drop of 900 points. And the last one is when IBM announced its 2013Q1 earnings which were significantly below expectations. By employing two different approaches to volatility calculation, we are able to compare the obtained results and thus draw a more definite conclusion. Our findings suggest that the decay rate of after-shocks for the considered earthquakes is well described by a power-law which is analogous to Omori's law.