I will discuss some results on the Navier-Stokes system of equations that involve sharp existence in the stationary case and conditional regularity in the non-stationary case. The common theme is that the quadratic nonlinearity and the pressure are both treated as weights generally belonging to a Sobolev space of negative order. This talk is based on joint work with Tuoc Phan and Cristi Guevara. (Received August 03, 2020)