In this dissertation, the effect of the maturity composition of marketable public debt on the term structure of interest rates is explored. The research has shown that this effect is relatively small. Unlike previous research, the yield changes around the quantity shocks were analyzed in relation to those shocks. Our results show that yields respond significantly to the auctioning of new bonds. The announcements of auctions do not have any impact on yields. A two factor affine yield model is used to explain the relationship between quantity shocks in public debt and the term structure of interest rates. The parameters are estimated using Generalized Method of Moments. While the relationship between quantities and yields is weak, yields can be related to the event of the auctioning process. A factor analysis shows that the quantity shocks are related to the slope and curvature of the term structure.