Abstract: We set out a behavioural model of the stock market in which investors are connected to each other through a network and may adopt value-based or trend-following strategies. Beliefs are updated based on an agent’s network and the relative performance of predictors. Our model nests both the opinion formation model of DeGroot (1974) and the Brock and Hommes (1997) heuristic-switching model as special cases. We provide some analytical results on convergence of beliefs in the network and use numerical analysis to examine how network structure impacts upon belief dynamics and shock propagation. A key finding is that a disaggregated network structure may give rise to rich dynamics which are absent when the population is modelled as a representative agent with heterogeneous beliefs.