1067-91-1919   **Yilun Dong*** (`dongyilun@gmail.com`), 500 College Avenue, Swarthmore, PA 19081, and **Ted Theodosopoulos** (`ttheodosopoulos@saintannsny.org`), 60 Wyckoff Street, Brooklyn, NY 11201. *Martingale properties of the wealth process in a spin market model.* Preliminary report.

We apply a spin model for market microstructure and define a wealth process as a stochastic integral. In our wealth process, agents make decisions under two competing objectives: being in the majority in their local random network neighbourhood (herding behaviour, trend following) and being in the global minority (contrarian trading). We analyse the effect of the volatility parameter λ and the coupling constant between local and global interactions α on the martingale properties and asymptotic stability of the resulting wealth process. In particular, we identify four distinct regimes and we arrive at a complete classification of the dynamic behaviour for our model market in the case of small neighbourhoods. We also provide a conjecture for this classification in the general case. (Received September 22, 2010)