Title:
On market crashes and granular economy

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Abstract:
Empirical observations on the collapse of the financial bubble has revealed certain regularities in terms of the price distribution of stocks. The distribution function of the ensemble of stock prices P(\pi) \sim \pi^{-\alpha} has \alpha=2 for large values of stock prices \pi, during the collapse. It also serves as a indicator to an approaching collapse as \alpha approaches 2.
We propose a simple model to address the relation between growth and inequality, in particular, between the exponent \alpha of price distribution and the flow of money in the economy. Our main thesis is that, because of the granularity of the economy (i.e. that objects are non-divisible) the flow in the economy essentially stops when \alpha \le 2.