# Dynamic Programming – Stochastic Growth

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*These notes borrow heavily from Stokey and Lucas, re-written in a way that I find easier to follow. That sometimes means more exposition, more explanation, worked-out examples, and added (occasionally silly) comments. Also probably some added typos and other mistakes.*

## 1 Stochastic Growth

There are, of course, any number of ways we could introduce randomness into the model. Let's keep is simple for now by considering only uncertainty in technology. In particular, let $\{z_t\}$ be a sequence of i.i.d. random variables. In period $t$, output is $y_t = z_t f(k_t)$. Since $f(k_t)$ indicates the supply of goods available per worker,