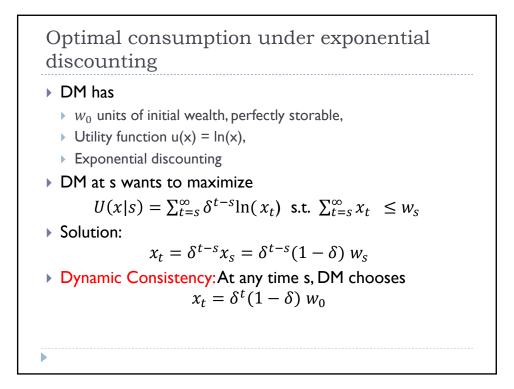
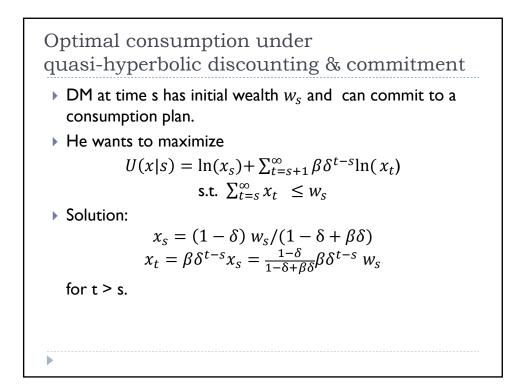


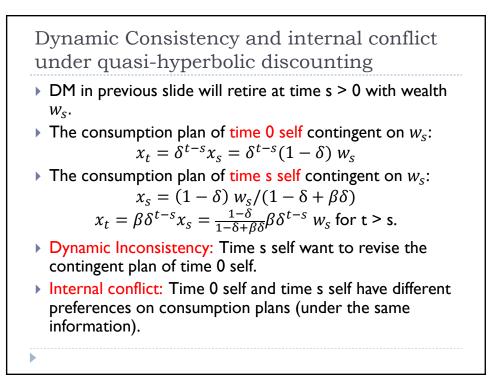
Functional forms • Exponential Discounting: $f(t) = e^{-rt} = \delta^t$ • Hyperbolic Discounting: $f(t) = (1 + \alpha t)^{-\beta/\alpha}$ • Quasi-hyperbolic Discounting: $f(t) = \beta \delta^t$ and f(0) = 1• Consumption sequences: $x = (x_0, x_1, ...)$ • Separable payoffs at time s: $U(x|s) = \sum_{t=s}^{\infty} f(t-s)u(x_t)$

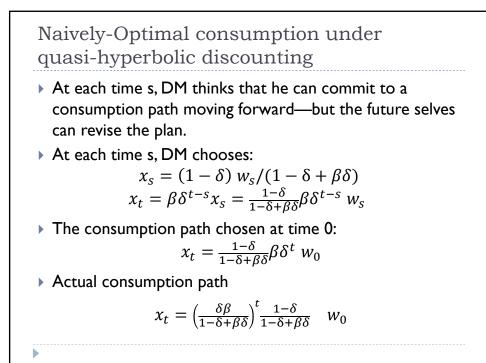


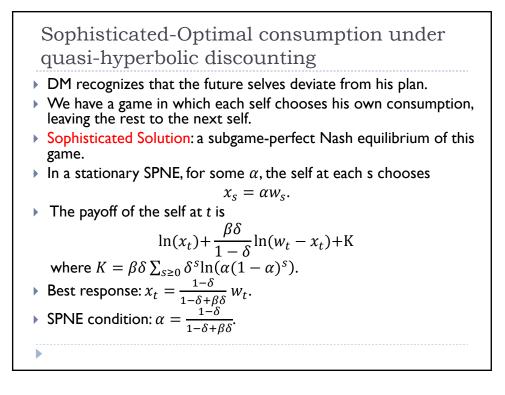
Dynamic Consistency and lack of internal conflict under exponential discounting
DM in previous slide will retire at time s > 0 with wealth *w_s*.
The consumption plan of time 0 self contingent on *w_s*: *x_t* = δ^{t-s}*x_s* = δ^{t-s}(1-δ) *w_s*The consumption plan of time s self contingent on *w_s*: *x_t* = δ^{t-s}*x_s* = δ^{t-s}(1-δ) *w_s*Dynamic Consistency: Time 0 self and time s self have the same contingent plan.

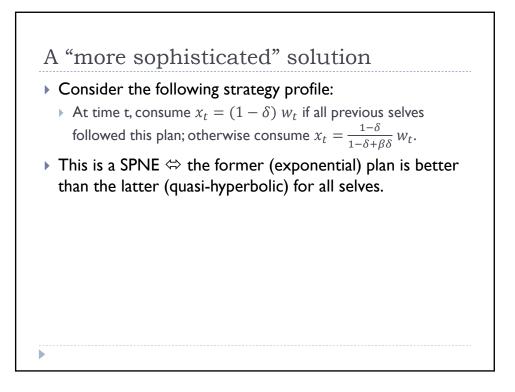
 Lack of internal conflict: Time 0 self and time s self have the same preferences on consumption plans (under the same information).











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