Complementary cumulative distributions AdamOptimizer QNGOptimizer approx='block-diag', λ =0.5 β_1 =0.9, β_2 =0.99, ε =10⁻⁸ 1.0 $\eta = 0.01$ n=0.75 $\eta = 0.025$ $\eta = 0.35$ $\eta = 0.025$ $\eta = 0.8$ $\eta = 0.05$ $\eta = 0.05$ -- $\eta = 0.85$ Probability of occurrence $\eta = 0.1$ $\eta = 0.1$ n=0.45-n=0.90.8 $---- \eta = 0.55$ $-\eta = 1.0$ n = 0.250.6 0.4 $\eta = 0.65$ ---- n=1.50.2 (a) (b) 0.0 MomentumOptimizer MomentumQNGOptimizer ρ =0.9, approx='block-diag', λ =0.5 $\rho = 0.9$ 1.0 n=0.025 $\eta = 0.25$ n = 0.02-n=0.08 $\eta = 0.05$ $\eta = 0.3$ Probability of occurrence $\eta = 0.1$ ---- n=0.35n=0.10.8 $\eta = 0.15$ $\eta = 0.06$ 0.6 0.4 0.2 (c) (d) 0.0 -0.2 0.8 0.0 0.4 0.6 0.8 1.0 0.0 0.2 0.4 0.6 1.0 quality ratio quality ratio