Complementary cumulative distributions AdamOptimizer **QNGOptimizer** β_1 =0.9, β_2 =0.99, ε =10⁻⁸ approx='block-diag', λ =0 1.0 stepsize=0.01 stepsize=0.01 stepsize=0.025 stepsize=0.025 Probability of occurrence stepsize=0.05 stepsize=0.05 0.8 stepsize=0.075 stepsize=0.075 stepsize=0.1 stepsize=0.1 stepsize=0.125 stepsize=0.125 0.6 stepsize=0.15 stepsize=0.15 stepsize=0.175 stepsize=0.175 stepsize=0.2 stepsize=0.2 0.4 stepsize=0.225 stepsize=0.225 stepsize=0.25 stepsize=0.25 0.2 (a) (b) 0.0 MomentumQNGOptimizer MomentumOptimizer ρ =0.9, approx='block-diag', λ =0 $\rho = 0.9$ 1.0 stepsize=0.01 stepsize=0.01 stepsize=0.025 stepsize=0.02 Probability of occurrence stepsize=0.05 stepsize=0.03 0.8 stepsize=0.075 stepsize=0.04 stepsize=0.1 stepsize=0.05 stepsize=0.125 stepsize=0.06 0.6 stepsize=0.15 stepsize=0.07 stepsize=0.175 stepsize=0.08 stepsize=0.2 stepsize=0.09 0.4 stepsize=0.225 stepsize=0.1 stepsize=0.25 stepsize=0.125 0.2 (d) (c) 0.0 0.2 0.6 8.0 0.2 0.6 8.0 0.0 0.4 1.0 0.0 0.4 1.0 quality ratio quality ratio