University of Roma Tor Vergata – Corso di Metodi Probabilistici e Statistici per i Mercati Finanziari Example of Lattice Plot for American CALL Option – Exercise, Prosecution and Market Values in CRR Model

market periods N = 14, risk free rate r = 0.003774561, u = 1.001503, d = 0.9984969, risk neutral probability (p,q) = (0.01755624, 0.9824438), strike K = 145. 12.07 12.07 11.84 **12.07** 11.84 11.6 11.57 **11.6 -11.6** • 11.06 1.37 • 11.37 **11.6** 11.37 11.37 • 10.5⁷ 1.13 • 11.13 11.13 11.13 11.13 11 -10.9 10.9 10.9 **10.08 10.6** 11.13 **10.9 10.9 10.9** • 10.11 10.66 • 10.63^{10.66} • 10.66 10.66 9.59 10.66 • 10.66 • 10.43 • **o** 10.66 10.66 10.14 0.43 10.43 9.62 10.66 **9.11** 10.43 10.43 10.43 10.43 10.2 10.2 10.2 10.2 🍙 9.65 **8.63** 9.13 10.17 **10.2 10.2 10.2 10.2 10.2** 9.96 9.96 9.96 9.96 9.96 **8.65** 9.68 **8.16** 9.16 **10.2** 9.96 9.96 9.96 9.96 9.96 9.73 9.73 9.73 9.73 9.73 9.73 **7.69 8.18 8.68 9.7** 9.73 9.73 9.73 9.73 9.73 9.73 9.5 9.5 9.5 9.5 **7.71 7.22** 8.7 **8.2** 9.21 9.73 9.5 9.5 9.5 **9**.5 **9**.5 **9**.5 9.27 9.27 9.27 9.27 9.27 .27 9.27 **8.73 7.24 6.77 7.73** 9.24 **●8.2**3 9.27 9.27 AC_PO_value 9.27 9.27 9.27 9.27 9.27 9.04 9.04 9.04 9.04 9.04 9.04 • 6.32 **6.78 7.26 7.75** 8.25 9.27 **8.75** 9.04 9.04 9.04 9.04 9.04 9.04 9.04 8.81 8.8 8.8 8.8 8.8 8.81 8.8 **6.33 5.86 6.8 7.28 7.78 8.27 8.78** 8.8 8.81 8.81 8.8 8.8 8.8 8.8 8.8 8.57 8.57 8.57 8.57 8.57 8.57 8.57 **5.88 6.82** 42 **6.35 -7.3 -7.8 8.3** 8.8 **8.57 8.57** 8.57 **8.57** 8.57 **8.57 8.57** 8.34 8.34 8.34 8.34 8.34 5.43 **5.89 -0.36 7.32 7.82 8.32 6.84** 8.34 8.34 8.34 **8.34 8.34 8.34** 8.34 8.11 8.11 8.11 8.11 8.11 **6.86 7.34 6.38 ●**7.84 **8.34** 5.44 **-**5.9 **8.11 8.11 8.11 8.11 8.11 8.1**1 7.88 7.88 7.88 7.88 7.88 5.46 **6.88 7.36 7.86** 5.92 **6.4 o**7.88 7.88 **-**7.88 **-**7.88 **-**7.88 **o**7.88 7.65 7.65 7.65 7.65 7.65 **6.41** 5.47 **5.93 6.89 7.38 7.88 o**7.65 **o**7.65 **-**7.65 **o**7.65 7.42 7.42 7.42 7.42 5.48 **6.43 6.91 -7.4 o**7.42 **o**7.42 **o**7.42 **o**7.42 **o**7.42 7.2 7.19 7.19 **7.2**● **5.96 6.44 7.42 6.93** 5.5 **7**.2 **o**7.19 **o**7.19 **-**7.2 6.97 6.96 ● 6.96 6.97 5.51 **5.98 6.46 6.95 6**.97 **6**.97 **6**.96 **6.96** 6.74 ● 6.74 **•** 6.74 5.52 **5.99 ●6.48 6.96 6**.74 **6.74 6.74** 6.51 6.51 5.54 **6.49 6.01 6.51** 6.51 **6.51** 6.28 6.28 **6.02** 5.55 **6.51 6**.28 6.28 6.06 6.05 5.56 **6.04 6.05 6.06** 5.83 5.58 **6.05 5.83** 5.6 5.59 **-**5.6 5.6 10 0 5 time

Legend

put market values

put exercise values

put prosecution values