Certificate Program in Python for Algorithmic Trading

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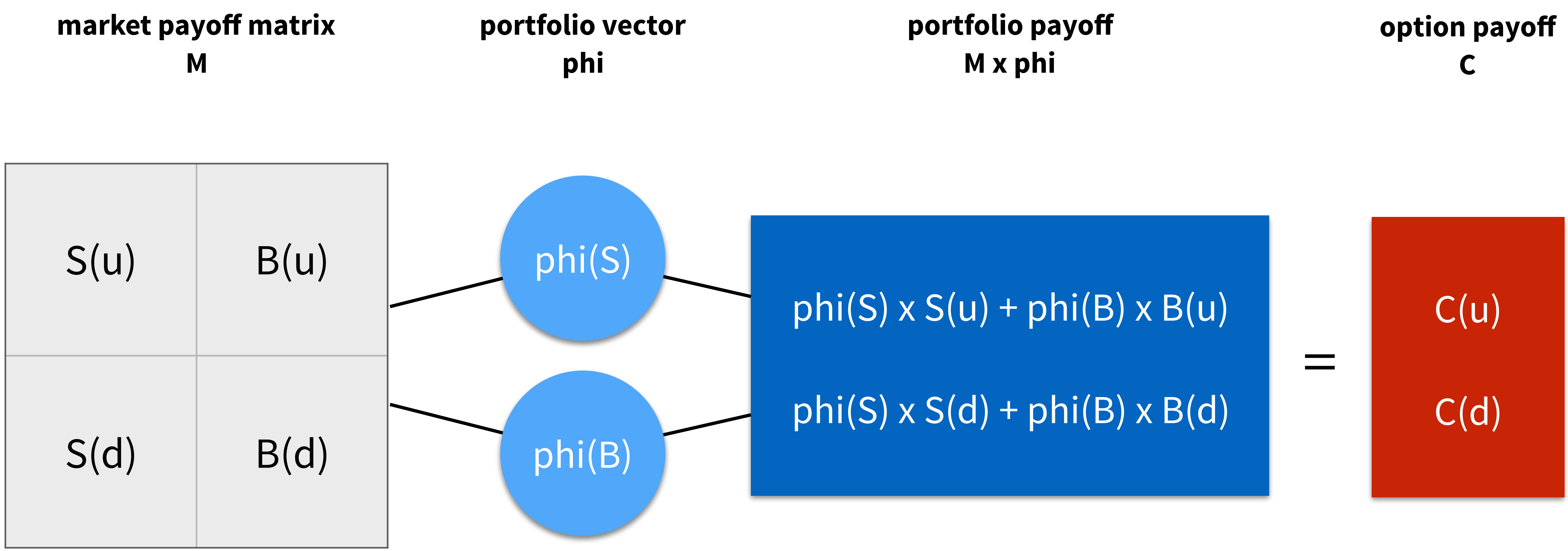
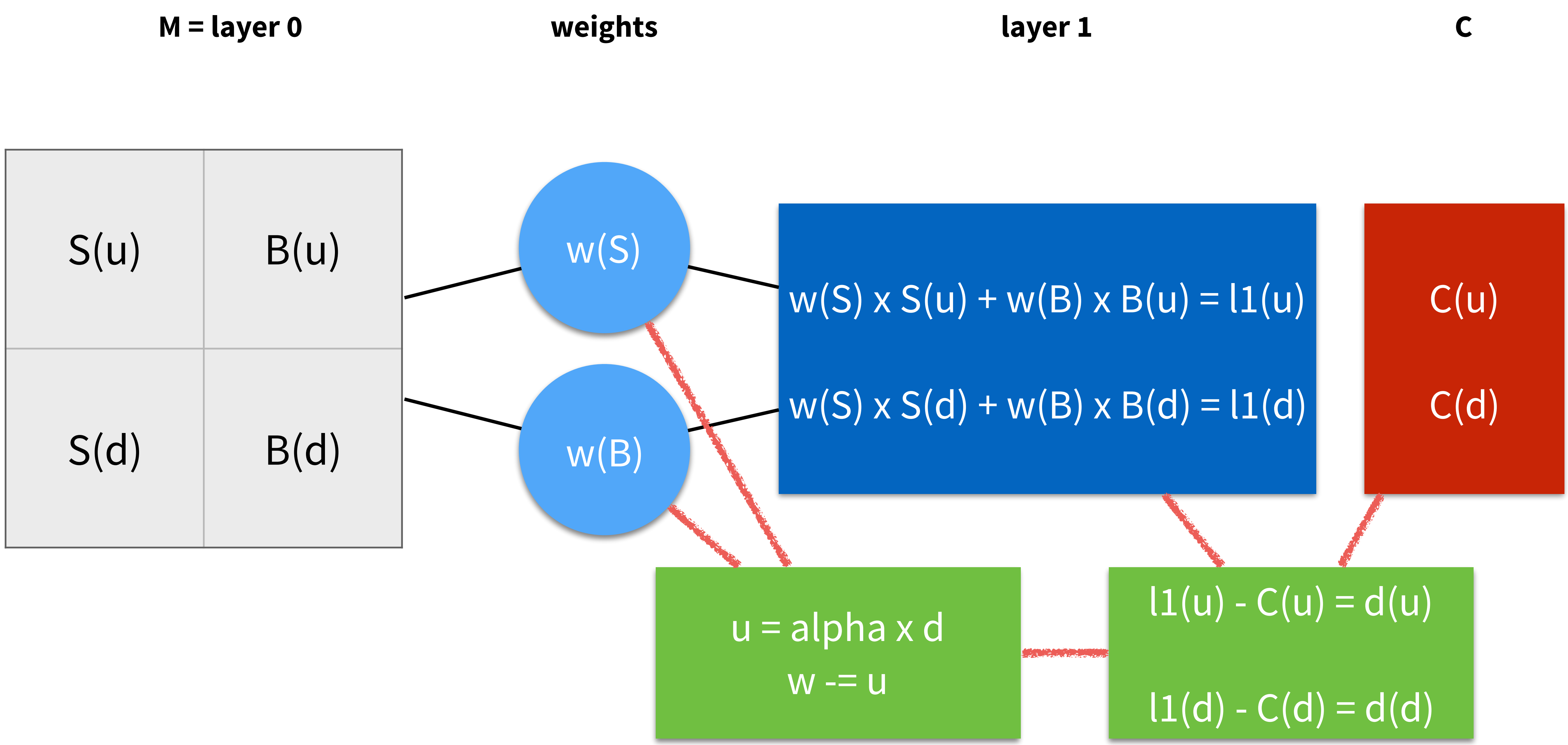
THE PYTHON QUANTS


market payoff matrix
M
portfolio vector
phi
portfolio payoff
M x phi
option payoff
C
S(u)
B(u)
S(d)
B(d)
phi(S)
phi(B)
phi(S) x S(u) + phi(B) x B(u)
phi(S) x S(d) + phi(B) x B(d)
=
C(u)
C(d)


M = layer 0
weights
layer 1
C
S(u)
B(u)
S(d)
B(d)
w(S)
w(B)
w(S) x S(u) + w(B) x B(u) = l1(u)
w(S) x S(d) + w(B) x B(d) = l1(d)
C(u)
C(d)
u = alpha x d
w -= u
l1(u) - C(u) = d(u)
l1(d) - C(d) = d(d)