Summary Page

Density Functions: Upper Tail

(1)
$$f(v|V > k) = \begin{cases} \dfrac{\phi(v)}{1 - \Phi(K)} & \text{for } v > K \\ 0 & \text{for } v < K \end{cases}$$

(2)
$$f(u|V > k) = \frac{\int_K^\infty \phi(u,v)dv}{1 - \Phi(K)}$$

Density Functions: Lower Tail

(3)
$$f(v|V \leq k) = \begin{cases} \dfrac{\phi(v)}{\Phi(K)} & \text{for } v < K \\ 0 & \text{for } v > K \end{cases}$$

(4)
$$f(u|V \leq k) = \frac{\int_{-\infty}^K \phi(u,v)dv}{\Phi(K)}$$

Expectations: Upper Tail

(5)
$$E(V|V > K) = \frac{\phi(K)}{1 - \Phi(K)}$$

(6)
$$\sigma^2(V|V > K) = 1 + \left[K - \frac{\phi(K)}{1 - \Phi(K)}\right]\left[\frac{\phi(K)}{1 - \Phi(K)}\right]$$

(7)
$$E(U|V > K) = \rho\frac{\phi(K)}{1 - \Phi(K)}$$

(8)
$$\sigma^2(U|V > K) = 1 + \rho^2\left\{\left[K - \frac{\phi(K)}{1 - \Phi(K)}\right]\left[\frac{\phi(K)}{1 - \Phi(K)}\right]\right\}$$

Expectations: Lower Tail

(9)
$$E(V|V \leq K) = -\frac{\phi(K)}{\Phi(K)}$$

(10)
$$\sigma^2(V|V \leq K) = 1 - \left[K + \frac{\phi(K)}{\Phi(K)}\right]\left[\frac{\phi(K)}{\Phi(K)}\right]$$

(11)
$$E(U|V \leq K) = -\rho\frac{\phi(K)}{\Phi(K)}$$

(12)
$$\sigma^2(U|V \leq K) = 1 - \rho^2\left\{\left[K + \frac{\phi(K)}{\Phi(K)}\right]\left[\frac{\phi(K)}{\Phi(K)}\right]\right\}$$