

we use the standard notation $\alpha=f$ to indicate that we are treating here the special case of a deterministic asset $y_a=y_f=0$, for which (11) becomes

$$r_f = \rho + \theta E[g] - \ln E[\exp(-\theta x)] . \quad (12)$$

Another immediate application of formula (11) is to the special case of a comprehensive broad-based equity index representing the entire economy. Here we use the standard notation $\alpha=e$ to indicate that we are treating the situation of economy-wide equity $y_a=y_e=x$, for which case equation (11) yields

$$E[r_e] = \rho + \theta E[g] - \ln E[\exp((1-\theta)x)] . \quad (13)$$

Subtracting (12) from (13), the equity premium here is

$$E[r_e]-r_f = \ln E[\exp(-\theta x)] - \ln E[\exp((1-\theta)x)] . \quad (14)$$

The meaning given in the literature to result (14) goes along the following lines. Interpret the left hand side of equation (14) as the *actual* risk premium that is observed historically in the real world. Interpret the right hand side of equation (14) as a theoretical *formula* for calculating this risk premium, given any coefficient of relative risk aversion θ , and, more importantly here, given the true subjective probability distribution of deviations of the random future growth rate g from its mean value $E[g]$.

Concerning the risk-aversion parameter θ , there seems to be some agreement within the economics profession that an array of evidence from a variety of sources suggests that it is somewhere between about one and about three. More accurately stated, any proposed solution which does *not* explain the equity premium for $\theta \leq 3$ would likely be viewed suspiciously by most members of the broadly-defined community of professional economists as being dependent upon an unacceptably high degree of risk aversion. By way of contrast, there is much less consensus about the true probability distribution of the deviation of future growth rates from their mean. The reason for this traces back to the unavoidable truth that, even under the best of circumstances (with a known, stable, stationary stochastic specification that can accurately be extrapolated from