words, the stock-market "forecast" appears to be about an order of magnitude more volatile than the fundamental underlying consumption payoff that it is supposed to be forecasting.

Summing up the scorecard for the standard neoclassical model, all in all we have three strong contradictions with reality and at least one serious internal contradiction, making the grand total add up to being a conundrum that is disturbing times four. It was previously noted that uncertainty in V has the qualitative effect of diminishing simultaneously the magnitude of both the equity-premium and risk-free rate discrepancies. We next examine what happens quantitatively to the family of equity puzzles when the structural parameters $\mathrm{E}[g]$ and $V[g]$ take on the standard familiar sampling distributions that arise naturally when n sample points are drawn randomly from a normal population.

3. The Bayesian Subjective Distribution of Future Growth Rates

As a preliminary guide to indicate roughly where the argument is now and where it is going, the outline of the ultimate full model is here sketched briefly. The Euler equation (3) is presumed to hold in subjective expectations for the utility function (4). The assumed probability distributions are: $g \sim \mathrm{N}(\mathrm{E}[g],g)$ and, yet to be imposed in a later section of the paper, $r_e \sim \mathrm{N}(\mathrm{E}[r_e],V[r_e])$. The following five parameters of the model will be assumed to be effectively known and fixed: $\mathrm{E}[r_e]$, $V[r_e]$, r_f, ρ, θ. The following two structural parameters are unknown and must be estimated statistically: $\mathrm{E}[g]$, $V[g]$. This section of the paper develops the Bayesian estimation of $\mathrm{E}[g]$ and $V[g]$, which will then be applied to the model in later sections.

Assuming the normal specification (15), define the random variable

$$W \equiv 1/V , \qquad \mathbf{(22)}$$

which is commonly called the *precision* of a normal probability distribution. Given any W, and given any random variable $\tilde{\mu}$, which represents the unknown mean of g, we can then write

$$g = \tilde{\mu} + \varepsilon , \qquad \mathbf{(23)}$$

where $\varepsilon \sim \mathrm{N}(0,1/W)$.

Purely for simplicity here suppose that initially, before any observations are made, the