

$$L = \frac{P}{P+W} \rightarrow \frac{P}{P+\sigma_{\epsilon}^2}$$

$$P = A^2 \left(P - \frac{P^2}{P+W} \right) + V \rightarrow A^2 \left(P - \frac{P^2}{P+W} \right) + V$$

$$P = A^2 \left(P - \frac{P^2}{P+W} \right) + V$$

$$P = A^2 \left(\frac{P(P+W) - P^2}{P+W} \right) + V$$

$$P(P+W) = A^2 (P(P+W) - P^2) + V(P+W)$$

$$P^2 + WP = A^2 WP + VP + VW$$

$$P^2 + ((1-A^2)W - V)P - VW = 0$$

$$P = \frac{-((1-A^2)W - V) \pm \sqrt{((1-A^2)W - V)^2 + 4VW}}{2}$$

$$P = \frac{(V - (1-A^2)W) \pm \sqrt{(V - (1-A^2)W)^2 + 4VW}}{2}$$

$$P = \frac{V \left(1 - (1-A^2) \frac{W}{V} \right) \pm V \sqrt{\left(1 - (1-A^2) \frac{W}{V} \right)^2 + 4 \frac{W}{V}}}{2}$$

$$P = V \frac{(1-FR) + \sqrt{(1-FR)^2 + 4R}}{2} \text{ with } F = 1 - A^2 \text{ and } R = \frac{W}{V}$$