$$PG: \quad \Phi^* = \arg \min_{\Phi} \sum_{s=1}^{S} D(p_s, r_s, V)$$
 (1a)
 $s.t. \quad \sum_{s=1}^{S} b_s \leq B(\cdot);$ (1b)
 $s = 1, 2, ..., S.$ (1c)

$$s.t. \qquad \sum_{s=1}^{S} b_s \le B(\cdot); \tag{1b}$$

$$s = 1, 2, ..., S.$$
 (1c)