TECHNICAL APPENDIX

for

The Interaction among Disclosure, Competition between Firms, and Analyst Following

This technical appendix details the duopoly output decisions under each disclosure policy, both with and without analyst following, that underlie proofs in the paper. In each case, the output choices are presented for the relevant proofs, and standard first-order conditions confirm the solution.

Proof of Proposition 1. In the absence of analyst following, the output decisions are as follows.

Both firms disclose

$$q_i^{dd}(\gamma,\gamma) = \frac{a}{2+k} + \frac{\gamma(2p-1)}{(2+k)(p^2+(1-p)^2)};$$

$$q_i^{dd}(-\gamma,-\gamma) = \frac{a}{2+k} - \frac{\gamma(2p-1)}{(2+k)(p^2+(1-p)^2)}; \text{ and}$$

$$q_i^{dd}(-\gamma,\gamma) = q_i^{dd}(\gamma,-\gamma) = \frac{a}{2+k}.$$

Only firm i discloses

$$q_i^{d\phi}(\gamma) = \frac{a}{2+k} + \frac{\gamma(2p-1)}{2+k};\ q_i^{d\phi}(-\gamma) = \frac{a}{2+k} - \frac{\gamma(2p-1)}{2+k};$$

$$q_j^{\phi d}(\gamma,\gamma) = \frac{a}{2+k} + \frac{\gamma(2p-1)(1+k(1-p)p)}{(2+k)(p^2+(1-p)^2)};\ q_j^{\phi d}(-\gamma,-\gamma) = \frac{a}{2+k} - \frac{\gamma(2p-1)(1+k(1-p)p)}{(2+k)(p^2+(1-p)^2)};$$

$$q_j^{\phi d}(\gamma,-\gamma) = \frac{a}{2+k} + \frac{\gamma k(2p-1)}{2(2+k)}; \text{ and } q_j^{\phi d}(-\gamma,\gamma) = \frac{a}{2+k} - \frac{\gamma k(2p-1)}{2(2+k)}.$$

Neither firm discloses

$$q_i^{\phi\phi}(\gamma) = \frac{a}{2+k} + \frac{\gamma(2p-1)}{2+k(2p-1)^2} \text{ and } q_i^{\phi\phi}(-\gamma) = \frac{a}{2+k} - \frac{\gamma(2p-1)}{2+k(2p-1)^2}.$$

Proof of Proposition 2. With guaranteed analyst following, the optimal output decisions are as follows.

Both firms disclose

$$\tilde{q}_i^{dd}(\gamma,\gamma,r) = \frac{a}{2+k} + \frac{\gamma(2p-1)}{(2+k)(p^2+(1-p)^2)};\ \tilde{q}_i^{dd}(-\gamma,-\gamma,r) = \frac{a}{2+k} - \frac{\gamma(2p-1)}{(2+k)(p^2+(1-p)^2)};$$

$$\tilde{q}_i^{dd}(-\gamma,\gamma,\gamma) = \tilde{q}_i^{dd}(\gamma,-\gamma,\gamma) = \frac{a}{2+k} + \frac{\gamma(2p-1)}{2+k};$$

$$\tilde{q}_i^{dd}(-\gamma,\gamma,-\gamma) = \tilde{q}_i^{dd}(\gamma,-\gamma,-\gamma) = \frac{a}{2+k} - \frac{\gamma(2p-1)}{2+k}.$$

Only firm i discloses

$$\tilde{q}_i^{d\phi}(\gamma,\gamma) = \frac{a}{2+k} + \frac{\gamma(2p-1)}{(2+k)(p^2+(1-p)^2)};\ \tilde{q}_i^{d\phi}(-\gamma,-\gamma) = \frac{a}{2+k} - \frac{\gamma(2p-1)}{(2+k)(p^2+(1-p)^2)};$$

$$\tilde{q}_i^{d\phi}(-\gamma,\gamma) = \tilde{q}_i^{d\phi}(\gamma,-\gamma) = \frac{a}{2+k};$$

$$\tilde{q}_j^{\phi d}(\gamma,\gamma,\gamma) = \frac{a}{2+k} + \frac{\gamma(2p-1)}{2+k}\left[\frac{(1-3p+3p^2)+(2+k)(1-p)^2p^2}{(p^2+(1-p)^2)(1-3p+3p^2)}\right];$$

$$\tilde{q}_j^{\phi d}(-\gamma,-\gamma,-\gamma) = \frac{a}{2+k} - \frac{\gamma(2p-1)}{2+k}\left[\frac{(1-3p+3p^2)+(2+k)(1-p)^2p^2}{(p^2+(1-p)^2)(1-3p+3p^2)}\right];$$

$$\tilde{q}_j^{\phi d}(\gamma,-\gamma,\gamma) = \tilde{q}_j^{\phi d}(\gamma,\gamma,-\gamma) = \frac{a}{2+k} + \frac{\gamma(2p-1)}{2};$$

$$\tilde{q}_j^{\phi d}(-\gamma,-\gamma,\gamma) = \tilde{q}_j^{\phi d}(-\gamma,\gamma,-\gamma) = \frac{a}{2+k} - \frac{\gamma(2p-1)}{2};$$

$$\tilde{q}_j^{\phi d}(\gamma,-\gamma,-\gamma) = \frac{a}{2+k} - \frac{\gamma(2p-1)}{2+k}\left[1 - \frac{kp(1-p)}{p^2+(1-p)^2}\right]; \text{ and}$$

$$\tilde{q}_j^{\phi d}(-\gamma,\gamma,\gamma) = \frac{a}{2+k} + \frac{\gamma(2p-1)}{2+k}\left[1 - \frac{kp(1-p)}{p^2+(1-p)^2}\right].$$

Neither firm discloses

$$\tilde{q}_i^{\phi\phi}(\gamma,\gamma) = \frac{a}{2+k} + \frac{\gamma(2p-1)(4+k)}{(2+k)[4(p^2+(1-p)^2)+k(2p-1)^2]};$$

$$\tilde{q}_i^{\phi\phi}(-\gamma,-\gamma) = \frac{a}{2+k} - \frac{\gamma(2p-1)(4+k)}{(2+k)[4(p^2+(1-p)^2)+k(2p-1)^2]};$$

$$\tilde{q}_i^{\phi\phi}(\gamma,-\gamma) = \frac{a}{2+k} + \frac{\gamma k(2p-1)}{(2+k)[4(p^2+(1-p)^2)+k(2p-1)^2]}; \text{ and}$$

$$\tilde{q}_i^{\phi\phi}(-\gamma,\gamma) = \frac{a}{2+k} - \frac{\gamma k(2p-1)}{(2+k)[4(p^2+(1-p)^2)+k(2p-1)^2]}.$$

Proof of Proposition 5. If both firms disclose and an analyst of precision $\tilde{p}$ follows, the optimal output decisions are as follows.

$$\tilde{q}_i^{dd}(\gamma,\gamma,r;\tilde{p}) = \frac{a}{2+k} + \frac{\gamma(2p-1)}{(2+k)(p^2+(1-p)^2)};$$

$$\tilde{q}_i^{dd}(-\gamma,-\gamma,r;\tilde{p}) = \frac{a}{2+k} - \frac{\gamma(2p-1)}{(2+k)(p^2+(1-p)^2)};$$

$$\tilde{q}_i^{dd}(-\gamma,\gamma,\gamma;\tilde{p}) = \tilde{q}_i^{dd}(\gamma,-\gamma,\gamma;\tilde{p}) = \frac{a}{2+k} + \frac{\gamma(2\tilde{p}-1)}{2+k};$$

$$\tilde{q}_i^{dd}(-\gamma,\gamma,-\gamma;\tilde{p}) = \tilde{q}_i^{dd}(\gamma,-\gamma,-\gamma;\tilde{p}) = \frac{a}{2+k} - \frac{\gamma(2\tilde{p}-1)}{2+k}.$$

Proof of Proposition 6. If both firms disclose and n analysts each of precision $\tilde{p}$ follow, the optimal output decisions are as follows (where m denotes the number of reports in $\boldsymbol{r}$ that equal γ).

$$\tilde{q}_i^{dd}(\gamma,\gamma,\boldsymbol{r};\tilde{p}) = \frac{a}{2+k} + \frac{\gamma(2p-1)}{(2+k)(p^2+(1-p)^2)};$$

$$\tilde{q}_i^{dd}(-\gamma,-\gamma,\boldsymbol{r};\tilde{p}) = \frac{a}{2+k} - \frac{\gamma(2p-1)}{(2+k)(p^2+(1-p)^2)};$$

$$\tilde{q}_i^{dd}(-\gamma,\gamma,\boldsymbol{r};\tilde{p}) = \tilde{q}_i^{dd}(\gamma,-\gamma,\boldsymbol{r};\tilde{p}) = \frac{a}{2+k} + \frac{\gamma[B(n,m,\tilde{p})-B(n,m,1-\tilde{p})]}{(2+k)[B(n,m,\tilde{p})+B(n,m,1-\tilde{p})]}.$$