

“Corporate Investment and Asset Price Dynamics:
Implications for SEO Event Studies and
Long-Run Performance”

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Overview

- SEOs: Price runup, announcement effects, and long-run underperformance.
- CFG argue: a firm = an expansion option + assets in place.
 1. Exercise the option only if sufficiently in the money \Rightarrow price runup.
 2. Asymmetric information \Rightarrow announcement effects.
 3. $\beta_{\text{Growth Option}} > \beta_{\text{Assets in Place}} \Rightarrow$ investing/financing = a drop in risk.
- An impressive and ambitious paper!

Bottom-Line

- With $\beta_{\text{Growth Option}} > \beta_{\text{Assets in Place}}$ hard-wired in the model, not clear how to extend the real-options framework to explain other related anomalies.

Outline

- An alternative proposition
- With $\beta_{\text{Growth Option}} > \beta_{\text{Assets in Place}}$, the value anomaly is tricky
- With $\beta_{\text{Growth Option}} > \beta_{\text{Assets in Place}}$, the payout anomaly is tricky
- A potential extension of CFG

An Alternative Proposition

- The relative risk of growth options and assets in place varies over business cycles:
 - Expansions: $\beta_{\text{Growth Option}} > \beta_{\text{Assets in Place}}$
 - Recessions: $\beta_{\text{Assets in Place}} > \beta_{\text{Growth Option}}$
- Theoretical predictions in Cooper (2004), Kogan (2004), and Zhang (2004).
- Empirical evidence in Lettau and Ludvigson (2001), Lustig and Van Nieuwerburgh (2004), and Petkova and Zhang (2004).

The Value Anomaly

- If $\beta_{\text{Growth Option}} > \beta_{\text{Assets in Place}}$, rationalizing the value anomaly is tricky.
- The inequality does not necessarily hold in Berk, Green, and Naik (1999).
- The inequality holds in Gomes, Kogan, and Zhang (2003):
 - Value firms have higher equity duration than growth firms.
 - Inconsistent with Dechow, Sloan, and Soliman (2004).

- The inequality holds in Carlson, Fisher, and Giammarino (2004, JF):
 - Value firms have higher operating leverage than growth firms.
 - Weak empirical support: Xing and Zhang (2004).
- Xing and Zhang (2004) measure operating leverage, l_1 , as the elasticity of operating profits w.r.t. sales — Mandelker and Rhee (1984) and Penman (2001).

$$\log(\text{Operating income after depreciation}) = l_0 + l_1 \log(\text{Sales}) + \varepsilon_t$$

- A sample of manufacturing firms from 1963 to 2002:

	Growth	2	3	4	Value	Value – Growth
l_1	1.025	1.013	0.908	0.919	0.969	–0.055
$t(l_1 = 1)$	0.215	0.185	–1.716	–1.365	–0.586	–1.07

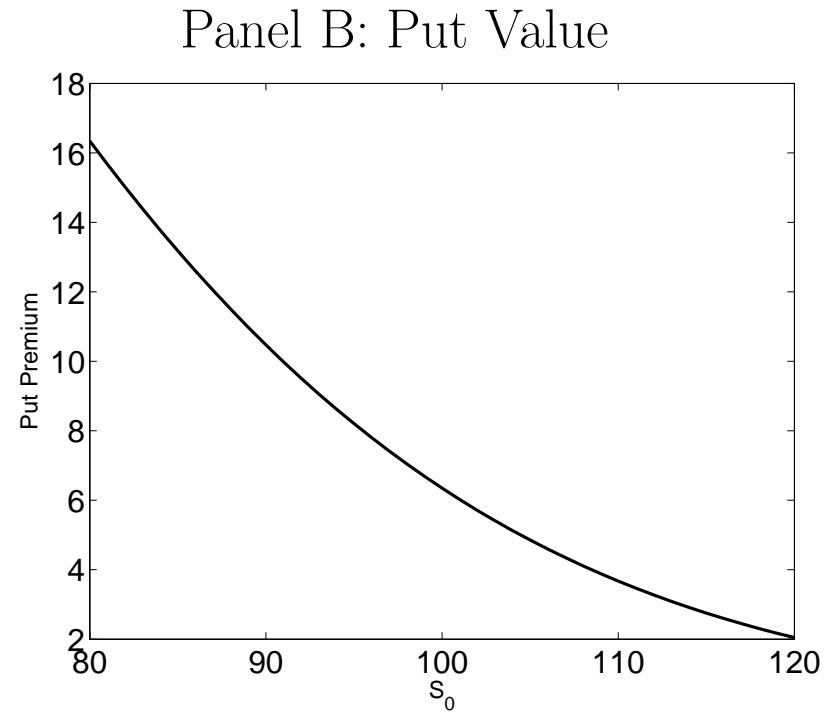
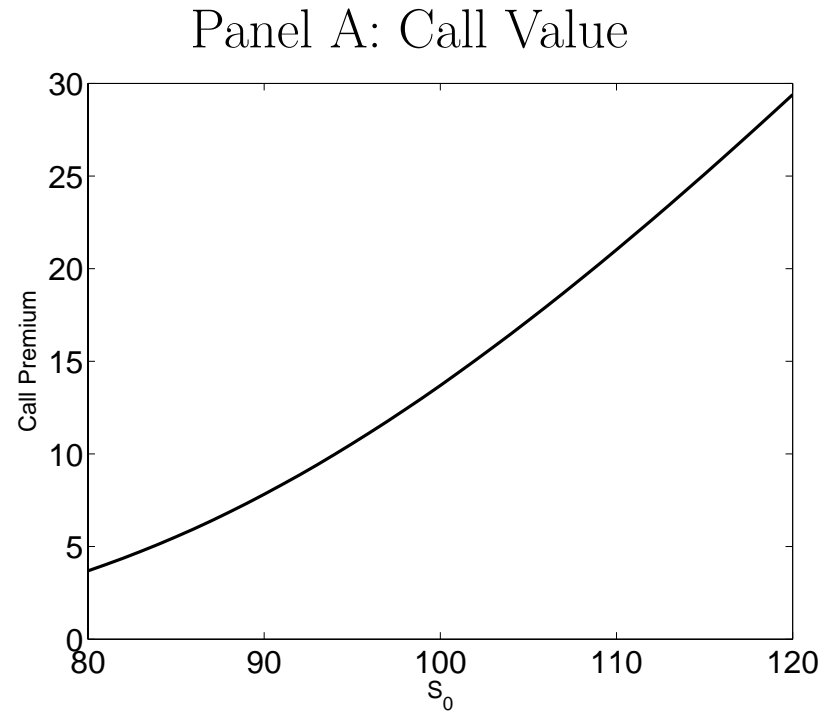
The Payout Anomaly

- The flip side of the SEO anomaly (e.g., Ikenberry et al. (1995))
- CFG: $\beta_{\text{Growth Option}} > \beta_{\text{Assets in Place}} \Rightarrow \text{payout (not investing)} = \text{risk } \uparrow$
- But Ikenberry et al.: the payout anomaly is stronger in value firms.
- The model implies that value firms have higher growth options.
- Counterintuitive.

A Potential Extension

- The Q -theory is qualitatively consistent with the value, payout, and SEO anomalies — Zhang (2004, “Anomalies”).
- Abel, Dixit, Eberly, and Pindyck (1996) — The Q - and real options theories both give the correct answers, but real options approach add option-interpretations.
- Abel et al.: A firm = abandon options + expansion options + assets in place.
- Investing = Exercising the marginal expansion (call) option
+ buying the marginal abandon (put) option
- Irreversible investment as in CFG rules out abandon options.

- **Conjecture:** Maybe the abandon option is more in the money and riskier in bad times, especially for value firms...



Conclusion

- An impressive paper!
- Need to model the abandon option to capture downside risk and to explain the value and payout anomalies.
- The CFG-mechanism on SEO-underperformance still works because the expansion option is riskier in good times when investing is important.