Discussion of:

Endogenous Elasticities: Price Multipliers Are Smaller for Larger Demand Shocks

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This Paper

- **Motivation:** Prior research finds small, plausibly exogenous shocks generate large price multipliers (high inelasticity), but little is known about large demand shocks.
  - stock-level price multipliers $1\sim 4$. [e.g.,Shleifer (1986), Coval and Stafford (2007), and Koijen and Yogo (2019)]
- **Headline results:**
  1. documents a new stylized fact that stock-level price multipliers (defined as the per-unit price impact of a demand shock) decline with demand shock magnitude.
  2. finds that investor demand elasticities (the inverse of price multiplier) increase when past price dislocations are larger.
- **Explaination:** these results reflect endogenous elasticity: when shocks are large, investors devote more attention or capital to arbitrage them, making overall demand more elastic and dampening the per-unit price impact.

Comments

An interesting and important paper that seeks to clarify how price multipliers extrapolate to the large shocks that are often most relevant for policy and broader economic questions!

1. Distribution of Shocks
2. Alternative Explanation
3. Checking for Concavity in Bond Markets

Distribution of Shocks

				Percentiles						
	Obs	Mean	StDev	1%	5%	25%	50%	75%	95%	99%
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Quarterly return (%)	4,712	2.82	30.36	-63.81	-41.00	-12.40	1.09	14.42	50.00	108.70
Demand (ΔBMI (scaled), %)	472	0.05	0.72	-2.10	-1.14	-0.16	0.00	0.24	1.32	2.32
Demand (FIT, %)	4,564	0.07	0.54	-1.22	-0.65	-0.12	0.01	0.21	0.98	1.92
Demand (OFI, %)	2,877	0.09	1.59	-4.66	-2.29	-0.57	0.12	0.79	2.42	4.48
Market cap ($m)	4,712	4,082	26,608	6	15	76	311	1,471	14,915	68,551

Table 1. Summary Statistics

A potential concern is that the so-called "large" shocks in this paper are actually not very large in economic terms. Table 1 shows that shocks greater than 2% are rare tail events. This also raises the concern that the estimated concavity of price multipliers might be driven disproportionately by a handful of extreme observations in the tails.

Robustness checks such as re-estimating the regressions after winsorizing the top and bottom 1% or 5% of demand shocks, or estimating multipliers separately across demand-shock quantiles (e.g., 0–25%, 25–50%, 50–75%, 75–95%, 95–100%).

Distribution of Shocks

A Comparable Exercise

I constructed a demand shock measure based on changes in 401(k) plan menus. Each year, plans add or drop mutual funds from their menus, inducing inflows and outflows at the fund level and thereby generating demand shocks for individual stocks. Importantly, these menu changes are exogenous to stock-level cash-flow news.

	1%	5%	25%	50%	75%	95%	99%	Mean	Std
$Demand(401k)$	-6.819%	-3.375%	-0.724%	0.359%	0.710%	3.612%	6.472%	0.214%	1.82

Table: Quantiles of the distribution-$Demand(401k)$

Distribution of Shocks

Table: Regression Results with *Demand*(401k)

	Unwinsorized		1% Winsorizing	
	(1)	(2)	(3)	(4)
$d_{n,t}$	3.79***	3.44***	3.55***	2.92***
	(3.57)	(2.98)	(3.43)	(3.01)
$d_{n,t} \times \lvert d_{n,t} \rvert$	-0.32**	-0.26**	-0.22*	-0.18
	(2.02)	(2.03)	(1.95)	(1.17)
Controls	No	Yes	No	Yes
Obs	20,498	20,498	20,498	20,498

Note: t-stats are reported in parentheses. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$.

Alternative Explanation

The anticipated demand shock has a smaller price impact than the unanticipated demand shock.

- The calibration of Vayanos-Woolley (2013) indicates that the price multiplier of $1.5 \sim 2.3$ of anticipated shocks implies a multiplier of $6.0 \sim 9.2$ of unanticipated shocks.
- Empirical work: Hartzmark and Solomon (2022), Lou, Yan and Zhang (2013)

An **alternative explanation** could be that large shocks are more anticipated while small shocks are more idiosyncratic.

Test:
For *FIT*: separate predictable vs. unexpected components as Lou (2012)
For *OFI*: examine whether part of imbalance is autocorrelated (hence expected).
If concavity remains after stripping out the expected component, then it really reflects endogenous elasticity, not anticipation.

Checking for Concavity in Bond Markets

- The authors might consider exploring whether concavity in price multipliers is also present in the bond market to further support their claim.
- The large-scale asset purchase programs provide natural experiments. [e.g., D'Amico and King (2013), Williams (2014), Haddad et al. (2025)]
- Testing whether bond price multipliers decline with shock magnitude in QE episodes would offer an external validation of the concavity mechanism and strengthen the argument that this is a general phenomenon across asset classes.

Conclusion

- The paper is novel.
  - Convincing evidence that demand curves for stocks are not linear across different shock sizes, but rather exhibit diminishing price impact for larger shocks.
  - combining macro-level analysis with micro-level validation.
- Useful to understand why the effect arises and what determines the price multiplier.
- Overall, a very interesting and well-executed paper. I enjoyed reading the paper. I wish you have a smooth publication process!