Discussion of

Foreign Exchange Risk Management Spillovers across the Production Network

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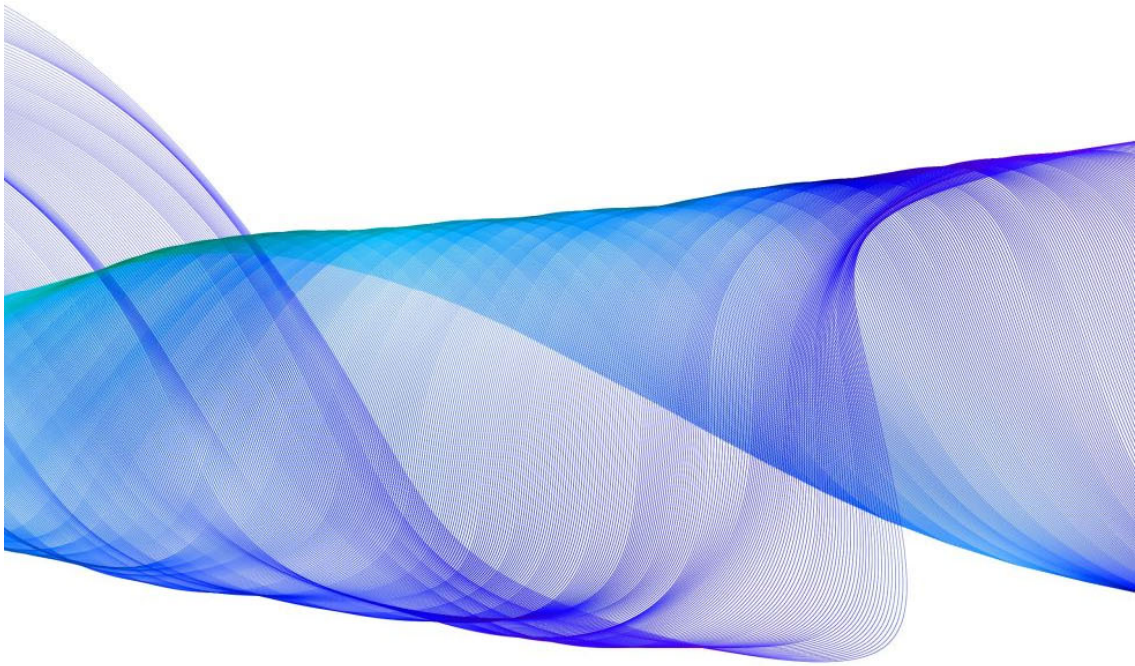
*ALL VIEWS ARE MY OWN



Key contributions

1. Hedging across the supply chain: theory and evidence
2. Existence of hedging spillovers (using new data!)

Net degree: Customers minus suppliers

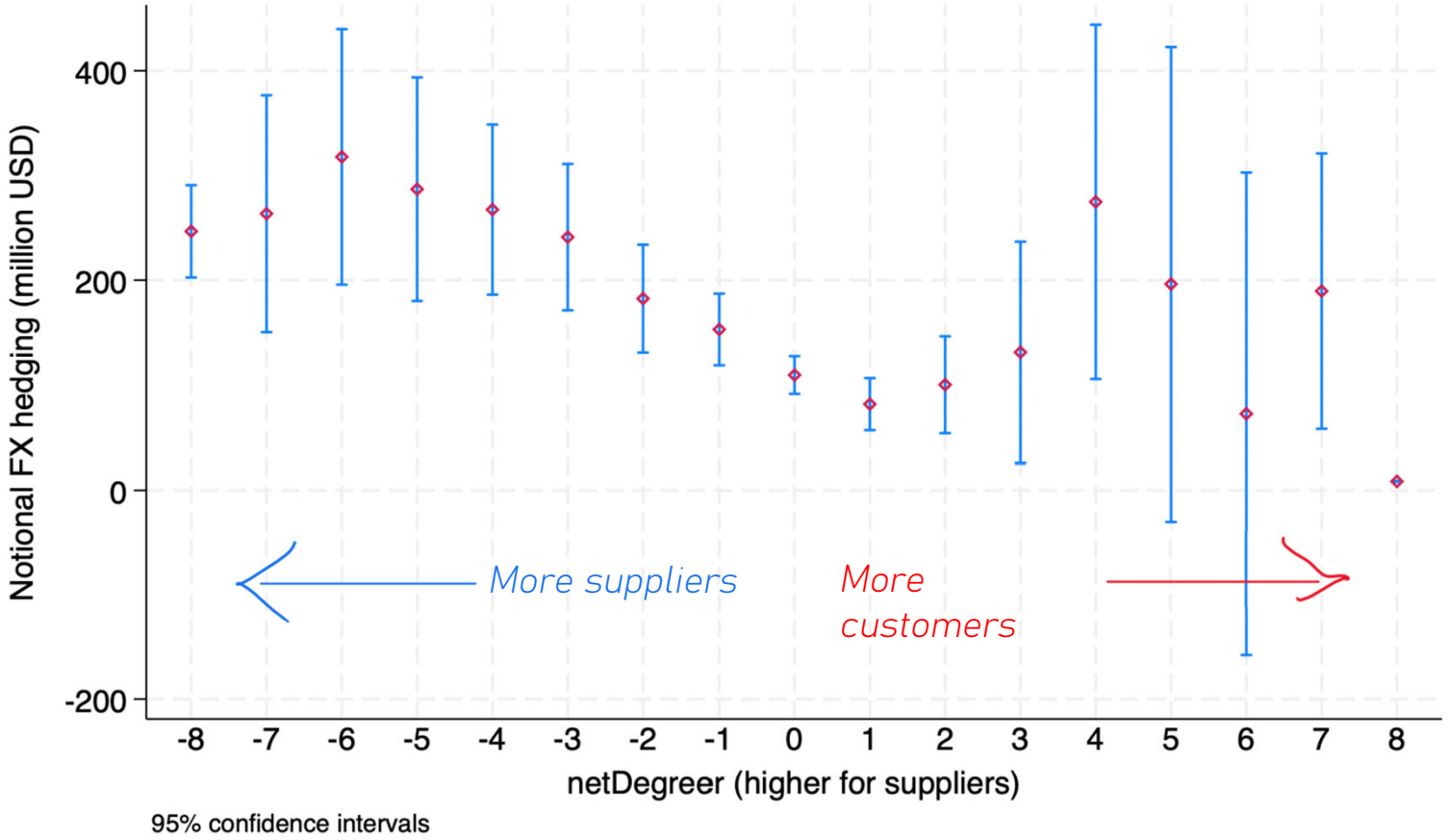


Figure 8: Net degree and firm's hedging choices

Net degree:
Customers minus
Suppliers

(Direct importers
and exporters lie
near the extremities)

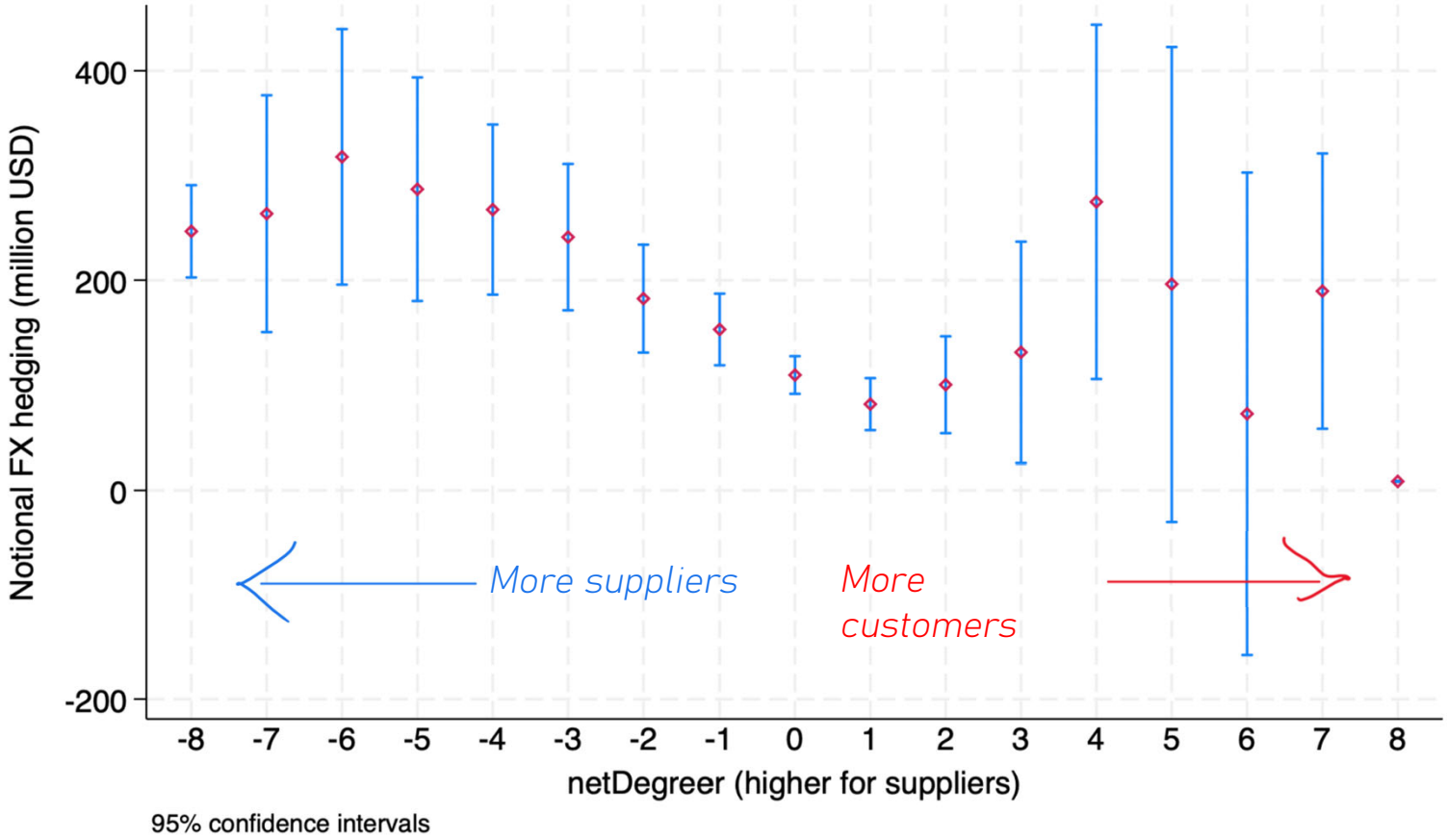


Figure 8: Net degree and firm's hedging choices

Impact of direct & indirect hedging on stability of firm performance

Table 4: The spillover effect in two swings

Swing 1: Draghi's "Whatever it takes" in July 2012						
	FX hedge		Uphedge		Downhedge	
	$\|\Delta NW\|$	$\|EuroBeta\|$	$\|\Delta COGS\|$	$\|EuroBeta\|$	$\|\Delta Sales\|$	$\|EuroBeta\|$
ATET	-0.0049***	-0.0464***	-0.0132***	-0.1131***	-0.0067	-0.0141
	(0.002)	(0.011)	(0.004)	(0.030)	(0.005)	(0.029)
N	3999	5071	1334	1619	1346	1619
Swing 2: FRB signaling tightening cycle in June 2014						
	FX hedge		Uphedge		Downhedge	
	$\|\Delta NW\|$	$\|EuroBeta\|$	$\|\Delta COGS\|$	$\|EuroBeta\|$	$\|\Delta Sales\|$	$\|EuroBeta\|$
ATET	-0.0144***	-0.1157***	-0.003	-0.0696**	-0.0127**	-0.0375*
	(0.002)	(0.013)	(0.003)	(0.021)	(0.004)	(0.019)
N	5861	8437	2528	2908	2524	2891

Table 5: Connected firms' hedging and firms' hedging choices

	$FXhedge_{i,t}$				$FXhedge_{i,t}$			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
L.$Uphedge_{i,t}$	-0.77***	-0.79***	-0.93***	-0.42	-1.36*	-1.61**	-1.47**	-6.22**
	(0.19)	(0.19)	(0.26)	(0.36)	(0.64)	(0.58)	(0.46)	(1.88)
L.$Downhedge_{i,t}$	-2.22	-2.22	-1.80	51.73***	-0.89**	-0.83**	-1.37***	58.31**
	(2.21)	(2.21)	(1.60)	(15.02)	(0.32)	(0.31)	(0.35)	(18.36)
L.$Asset_{i,t}$	3.71***	3.74***	4.63***	0.56	3.72***	3.74***	4.05***	12.84***
	(0.64)	(0.64)	(1.05)	(2.25)	(0.49)	(0.49)	(0.89)	(2.87)
L.$Trade_{i,t}$		45.16***	97.26*	118.5		47.23*	122.99**	594.3
		(10.83)	(40.50)	(352.55)		(18.35)	(47.59)	(469.82)
L.$Centrality_{i,t}$			-15107.3	73394.85			-9508.7	-91642.97*
			(11162.36)	(43052.73)			(10225.78)	(36809.20)
L.$NetDegree_{i,t}$				-2.07				-8.28
				(4.89)				(6.25)
Constant	10.40***	7.02**	11.87	185.59***	10.11***	6.55***	10.46*	102.13
	(2.49)	(2.71)	(7.43)	(53.29)	(1.43)	(1.87)	(4.30)	(54.77)
Adjusted R^2	0.62	0.62	0.66	0.85	0.08	0.09	0.09	0.18
N	63682	63404	17537	804	65136	64859	18292	868
Firm FE	Yes	Yes	Yes	Yes	No	No	No	No
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Beautiful insight

- Within a production network, when one firm hedges there are spillovers for upstream and downstream firms
- These spillovers may not be easy for firms to see, and therefore internalize ➔ *Role for policy*

Comments

1. Organization of the firm

- Supply chains often exist within the boundaries of the firm
  - Are findings about the firm's location along the network (net degree) or really about ownership structure?

Organization of the firm

- Are parent firms more likely to be at the extremities (cars, aerospace, tech) and take on hedging for the network?
  - *If there are economies of scale in hedging (like debt), it would make sense for a complex firm to concentrate hedging in one or just a few entities.*
- Firms also are often part of complex conglomerates.
  - Hedging could be concentrated in another part of the conglomerate and benefits distributed via internal credit channels, transfer pricing, etc. (Correa and Goldberg 2022)
- …More exploration with respect to ownership, affiliations, and intra-firm trade would be welcome

2. Market power & distribution of er risk

Hellerstein (2008, US beer market): *Foreign manufacturers generally bear a greater cost (or reap a greater benefit) following an exchange-rate-induced marginal-cost shock than do domestic consumers, domestic manufacturers, or the domestic retailer*.

Market power & distribution of er risk

Are there domestic production networks who forego hedging because they can push the exchange rate risk onto the foreign supplier?

- c.f. Goldberg and Tille (2016) market power ⇔ currency invoicing.

Can one impute the degree of the unhedged risk pushed to foreign buyers or suppliers?

- Does it vary by the industry or country of the trading partner (see Bussiere, Chiaie, and Peltonen 2014)?

3. Role of retail and wholesale

- Empirically dominant in chart of notional hedging amounts (Fig 5). Prevalent also in regression sample?
- Where do retailers/wholesalers fit in the network? Are they direct importers/exporters? Primary importers/exporters?
- Is the model general to retail/wholesale or mainly geared to manufacturing?
  - Hellerstein (2008): Wholesalers charge higher markups on imported varieties of beer in anticipation of exchange rate fluctuations. How does this coincide with or work outside of the network model?

4. Relationship between centrality and net degree

- As discussed in Liu (2019), centrality captures how many and how diverse the downstream users of a firm's output are.
- This paper suggests that perhaps we should think of an upstream *and* downstream centrality
  - A direct exporter may be a more or less central channel for exports of domestic outputs, just as a direct importer a more or less central upstream supplier.
  - Spillovers from hedging may be larger based on both upstream and downstream centrality.
  - Downstream centrality may be even more important due to prevalence of demand-related risk under dollar invoicing.
- How does this overlap with measures of net degree?
  - Both are included in regressions in Table 5. Are they collinear?

5. Implications of firm size

- The biggest importers and exporters are BIG.
- Are there granular effects of exchange rate exposure due to firm size or network effects (a la Gabaix 2011)?

6. Policy implications

- Very in-depth analysis of optimal hedging within the model, fewer discussions of practical applications.
- Is hedged and unhedged exposure spatially concentrated across the US?
  - Implications for political polarization (see Herreño, Morales, and Pedemonte 2024)
- Centrality: Liu (2019) shows that subsidizing highly central (upstream) suppliers can improve aggregate output and welfare.
  - Would the same apply for subsidizing hedging?
  - Could/Should subsidized hedging be a tool for industrial policy?

An outstanding paper

- Adds a great deal to our understanding of the implications of exchange rate exposure and hedging on the ground.
- Comments here aimed at contextualization and implications of these exciting new discoveries.