ECONOMIC IMPACT PAYMENTS AND HOUSEHOLD SPENDING DURING THE PANDEMIC

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THIS PAPER: LATEST IN A LINE OF IMPORTANT RESEARCH!

➤ Successor to Johnson, Parker, Souleles (2006) and Parker, Souleles, Johnson, McClelland (2013), among others

➤ Needed to work harder this time

  ➤ little variation in timing, no random variation

  ➤ use cross-sectional variation in receipt and amount

➤ Ultimately convincing, despite weaker internal validity

  ➤ Stronger external validity than various studies using administrative data

KEY FINDING: A DECREASE IN ESTIMATED MPCS?

Table VI: Estimated MPCs on CE-measured non-durable goods and some services

	Full Sample, Three-months of receipt	Recipients Only, Three-months of receipt	Full Sample Three months of receipt and subsequent three months
2001 Economic Rebates	0.386	0.247	0.691*
	(0.135)	(0.213)	(0.260)
2008 Stimulus Payments	0.121	0.308	0.347
	(0.055)	(0.112)	(0.155)
2020 EIP 1	0.102	-0.062	0.124
	(0.028)	(0.072)	(0.068)
2020 EIP 2	0.083		0.153
	(0.039)		(0.104)
2021 EIP 3	0.009		-0.030
	(0.018)		(0.047)

Low, but still significant for a subset of spending! →

← *What's going on here?*

Source: Johnson et al. (2006)), Parker et al. (2013), and Parker et al. (2022) and current paper. The * denotes a large MPC driven in part by one outlier in spending on food.

LARGER WITH ALL GOODS AND SERVICES, LAGS ADDED

Table V: The longer-term response of consumer expenditures to EIP receipt

	Dependent variable: scaled dollar change in spending on								
	Panel A: EIP1			Panel B: EIP2			Panel C: EIP3		
	Strictly non-durables	Nondurables	All CE goods and services	Strictly non-durables	Nondurables	All CE goods and services	Strictly non-durables	Nondurables	All CE goods and services
$\widetilde{EIPn}_t$	0.075 (0.020)	0.102 (0.028)	0.234 (0.059)	0.103 (0.031)	0.083 (0.039)	0.247 (0.090)	0.030 (0.016)	0.009 (0.018)	0.015 (0.043)
$\widetilde{EIPn}_{t-1}$	-0.011 (0.020)	-0.080 (0.028)	-0.017 (0.070)	0.030 (0.038)	-0.013 (0.045)	0.107 (0.124)	0.000 (0.010)	-0.049 (0.019)	-0.150 (0.049)
	Implied cumulative fraction of EIP spent over two three-month periods								
	0.139 (0.051)	0.124 (0.068)	0.452 (0.158)	0.235 (0.086)	0.153 (0.104)	0.601 (0.257)	0.059 (0.036)	-0.030 (0.047)	-0.119 (0.112)

Large fraction spent within 6 months, especially for EIP2, though big error bars and below some previous estimates

Crazy low for EIP3. Possibly hard to disentangle lagged effects of EIP2 and EIP3 given limited independent variation? Or something else iffy about EIP3 #s?

BOTTOM LINE: MPCS PROBABLY SMALLER BUT STILL THERE

➤ Not too surprising given:

  ➤ households with much more liquidity than usual

  ➤ limited consumption opportunities during pandemic

➤ My question: did this **diminish** or merely **delay** the transfer multiplier?

  ➤ If **delay**: maybe payments did less than usual on impact, but continue to **fuel demand right now**?

SIMPLE MODEL OF DYNAMIC MULTIPLIERS

➤ Three groups:

  ➤ **Hand to mouth:** consume all income immediately

  ➤ **Target:** aim for a given bond target, consume fraction of gap between bond and target each quarter (microfound with diminishing utility from bonds)

  ➤ **Long-term savers:** standard representative agent, hold any income forever and consume interest 'r' on it

➤ Expectations can be myopic or rational

➤ Calibration: r=0, β=1, government either increases debt permanently or pays back in far future (at date we'll ignore)

➤ In background: sticky wages, ultimately demand-determined production

SIMPLE MODEL OF DYNAMIC MULTIPLIERS

➤ Three groups: *Why both? Needed to match **intertemporal MPCs!***

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THE CUMULATIVE TRANSFER MULTIPLIER

*Result: the **cumulative** multiplier on a transfer, assuming no monetary feedback (i.e. r constant), is always*

$$\frac{1 - \text{share of transfer given to saver}}{\text{marginal share of output earned by saver}}$$

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➤ *Why? Multiplier logic, **just cumulative** over time:*

➤ *Non-savers ultimately spend what they receive, that spending creates income, the non-savers will ultimately spend everything that doesn't leak to saver, and so on...*

THE CUMULATIVE TRANSFER MULTIPLIER

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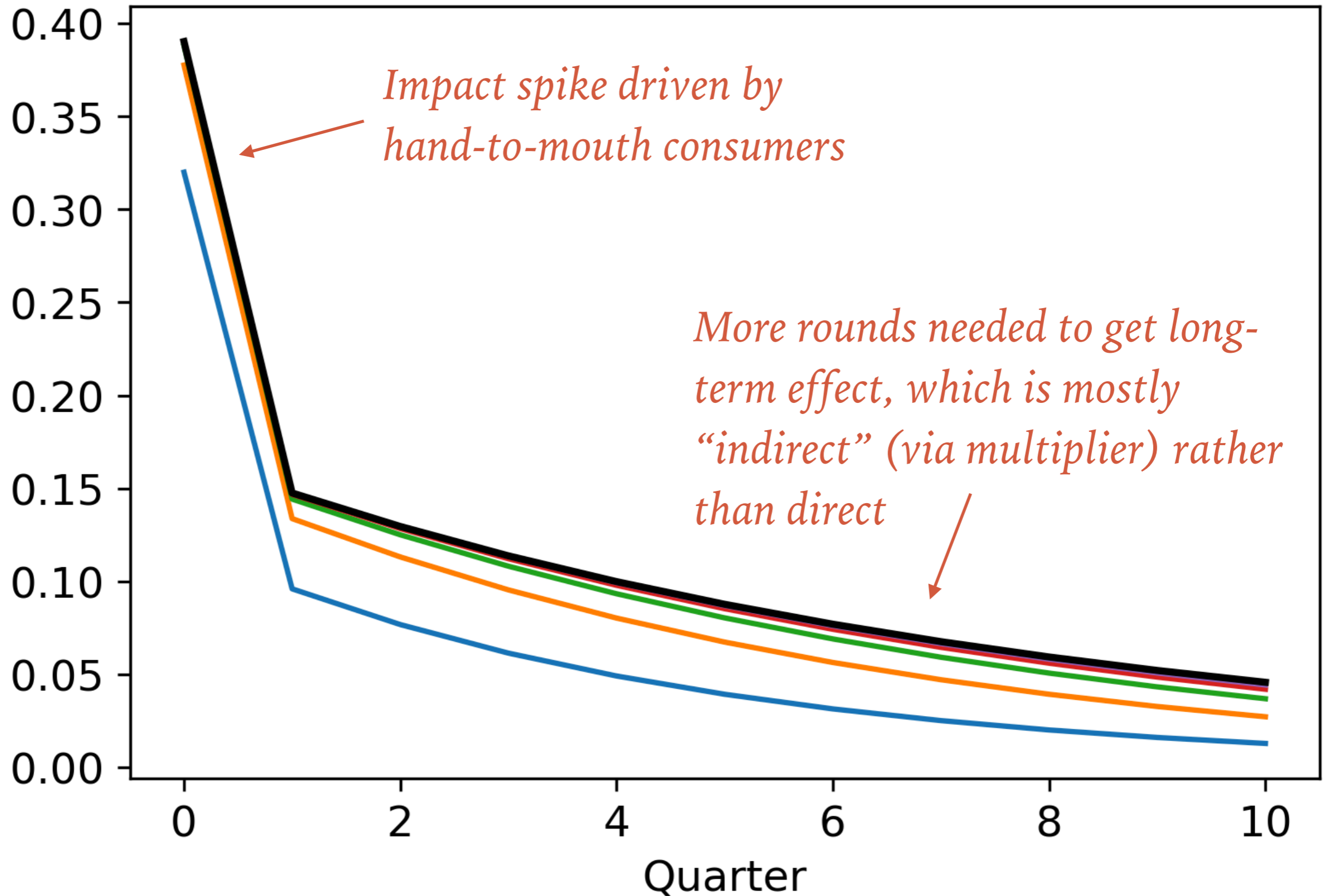
$$\frac{1 - \text{share of transfer given to saver}}{\text{marginal share of output earned by saver}}$$

➤ *Implication: for the **cumulative** multiplier, the distinction between hand-to-mouth and target households **doesn't matter**, even though this is a big deal for the **impact** multiplier*
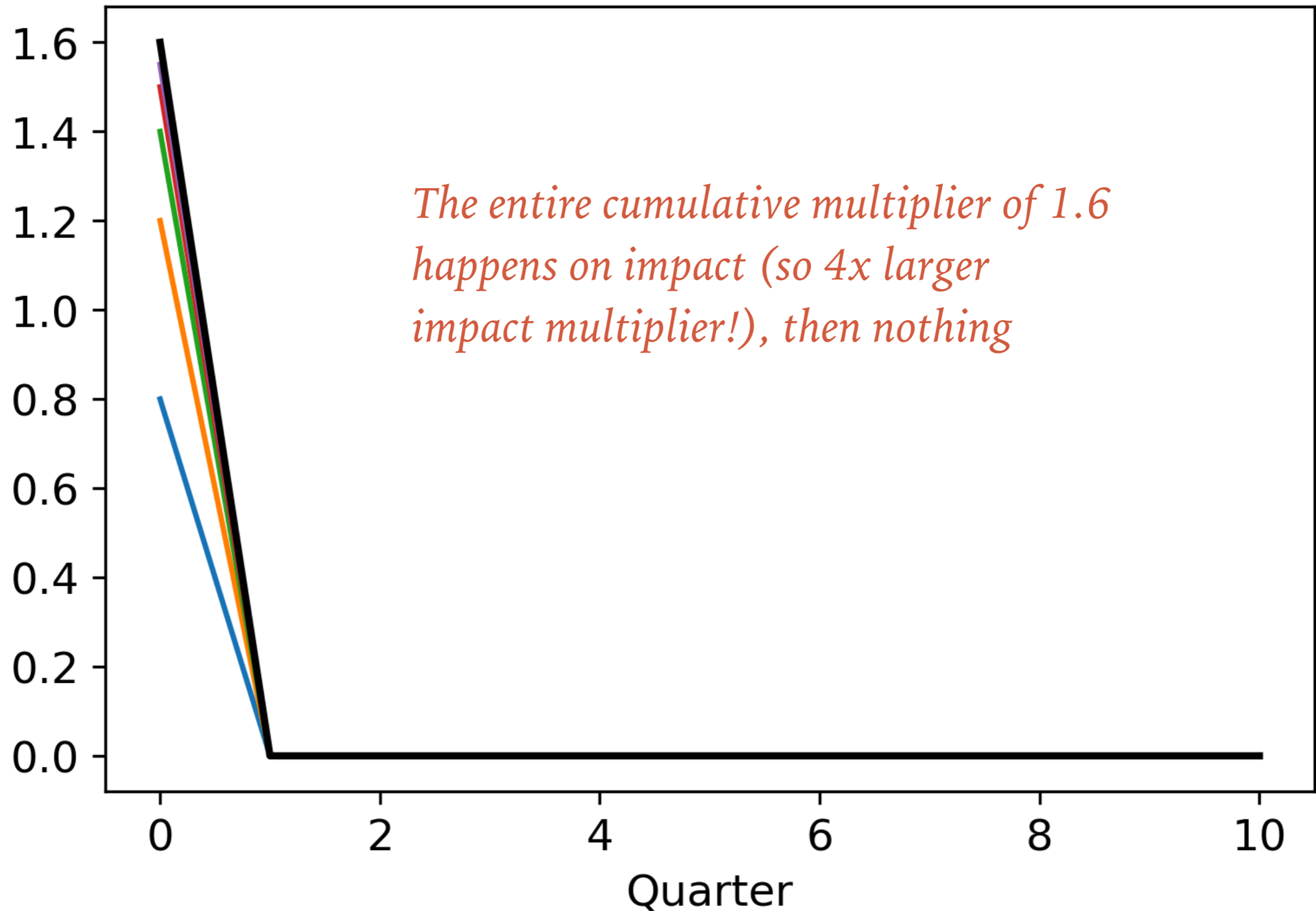
ILLUSTRATIVE EXAMPLE, CALIBRATED FOR PRE-PANDEMIC

➤ Assume **shares of transfer** received by (rest to savers):

  ➤ Hand-to-mouth: 20%

  ➤ Target: 60%

➤ Assume target households consume 20% of excess bonds each quarter

Aggregate 1-qtr MPC out of transfer: 20%*1 + 60%*0.2 = 0.32

➤ Assume marginal shares of output:

  ➤ Hand-to-mouth: 10%

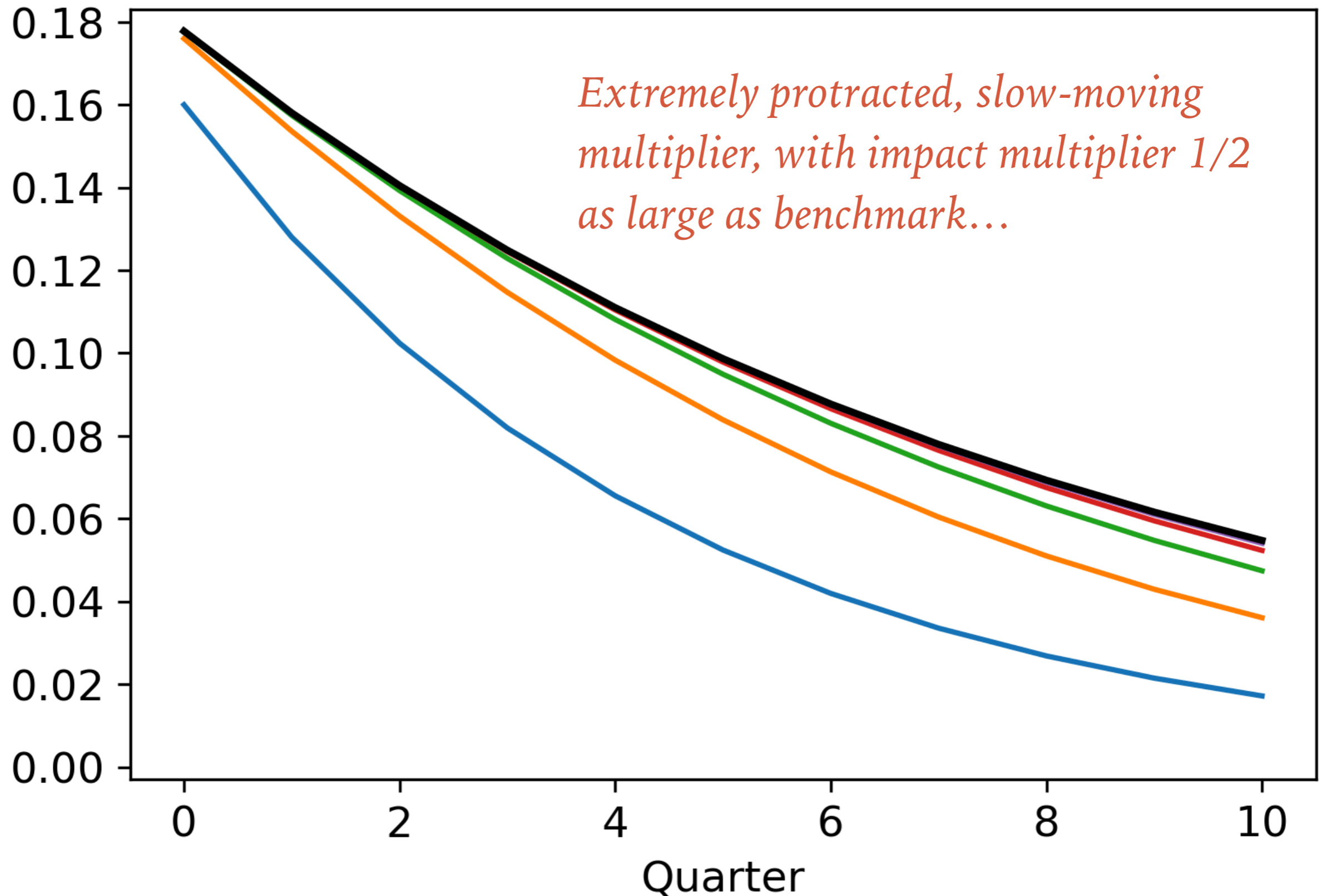 ➤ Target: 40%

Cumulative transfer multiplier: 80% / 50% = 1.6

OUTPUT EFFECT OF DATE–0 TRANSFER: ROUNDS OF SPENDING
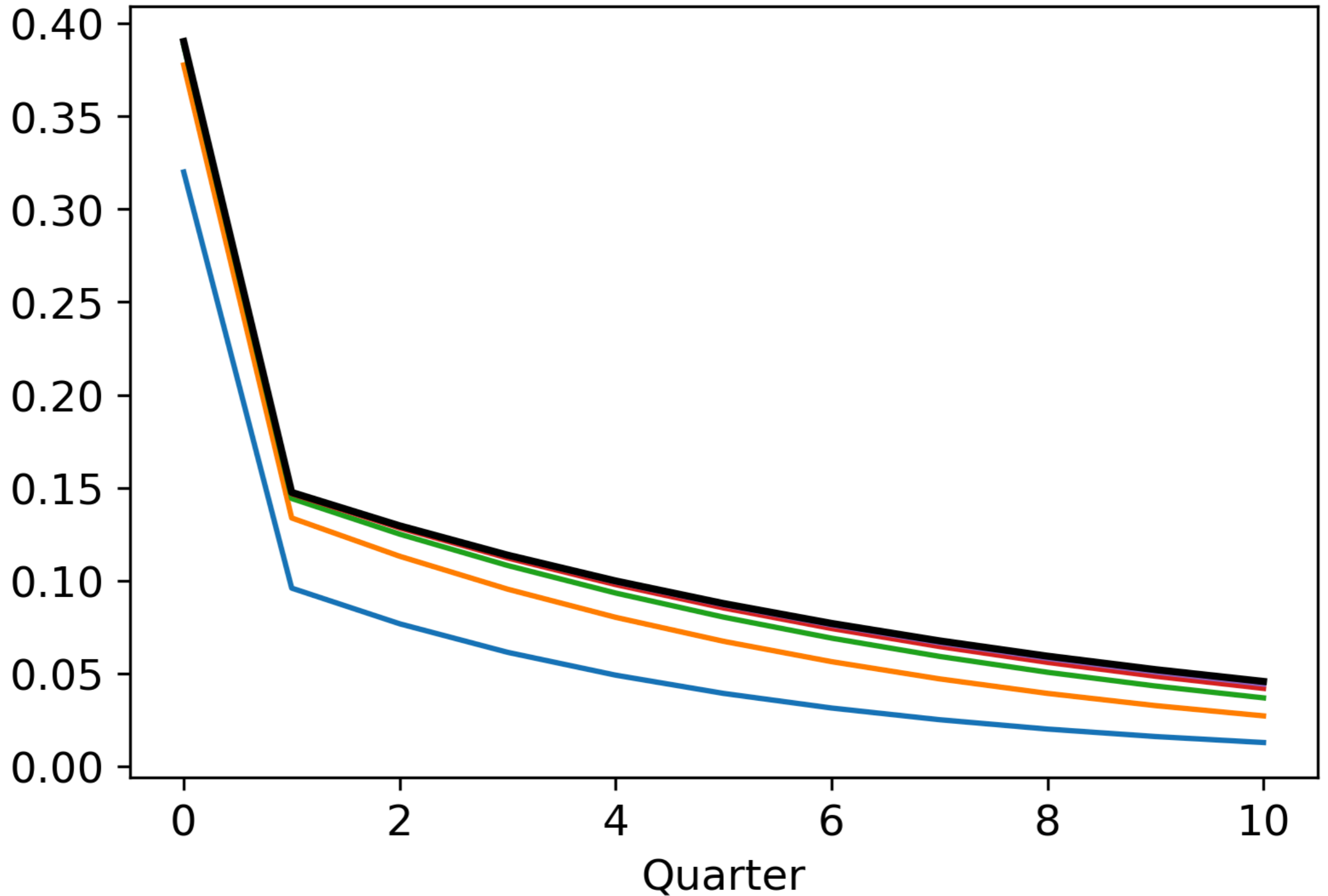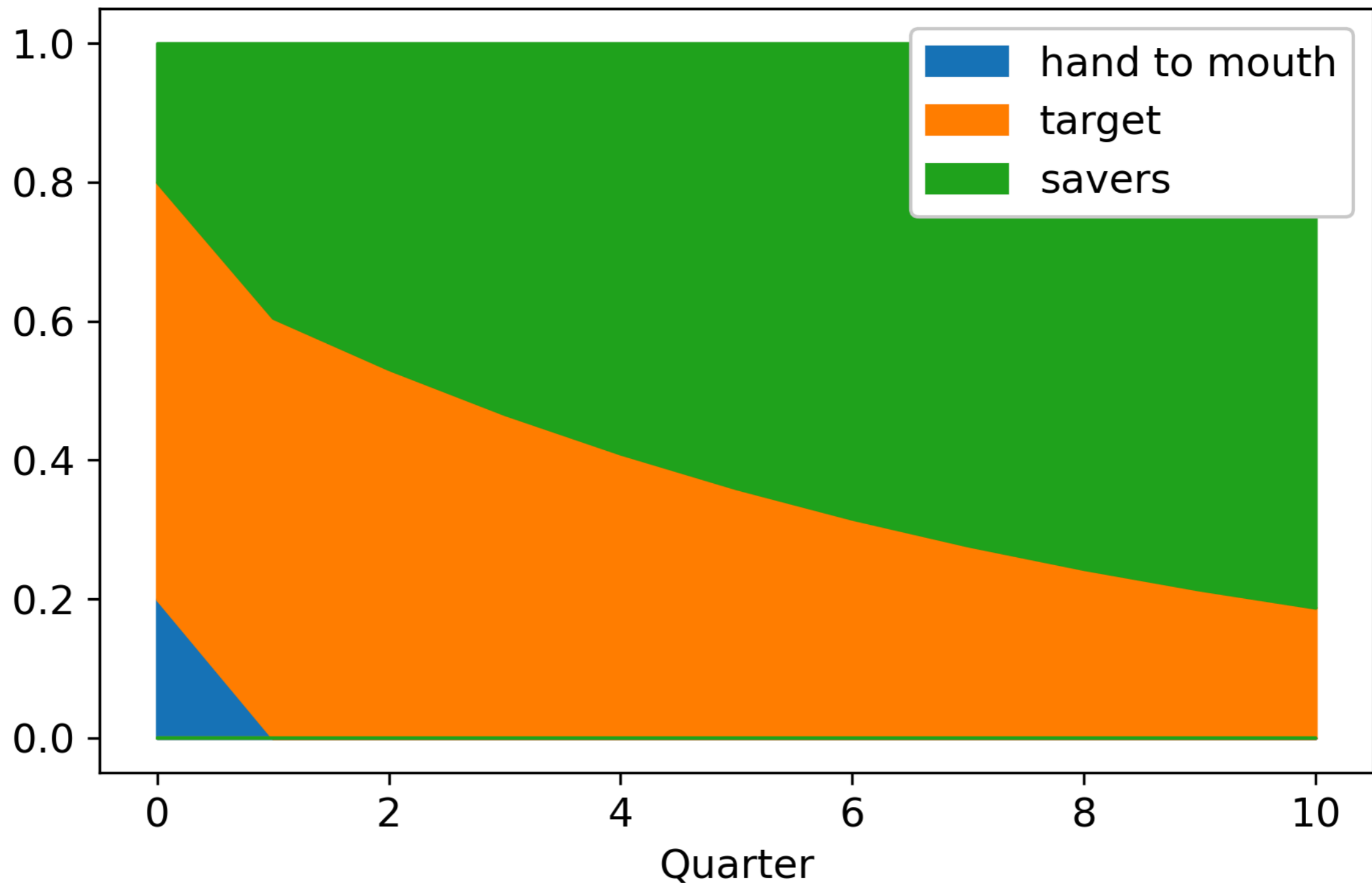

Impact spike driven by hand-to-mouth consumers

More rounds needed to get long-term effect, which is mostly "indirect" (via multiplier) rather than direct

Quarter

IF ALL NON-SAVERS WERE HAND-TO-MOUTH...

The entire cumulative multiplier of 1.6 happens on impact (so 4x larger impact multiplier!), then nothing

IF ALL NON-SAVERS WERE TARGET HOUSEHOLDS...

Extremely protracted, slow-moving multiplier, with impact multiplier 1/2 as large as benchmark...
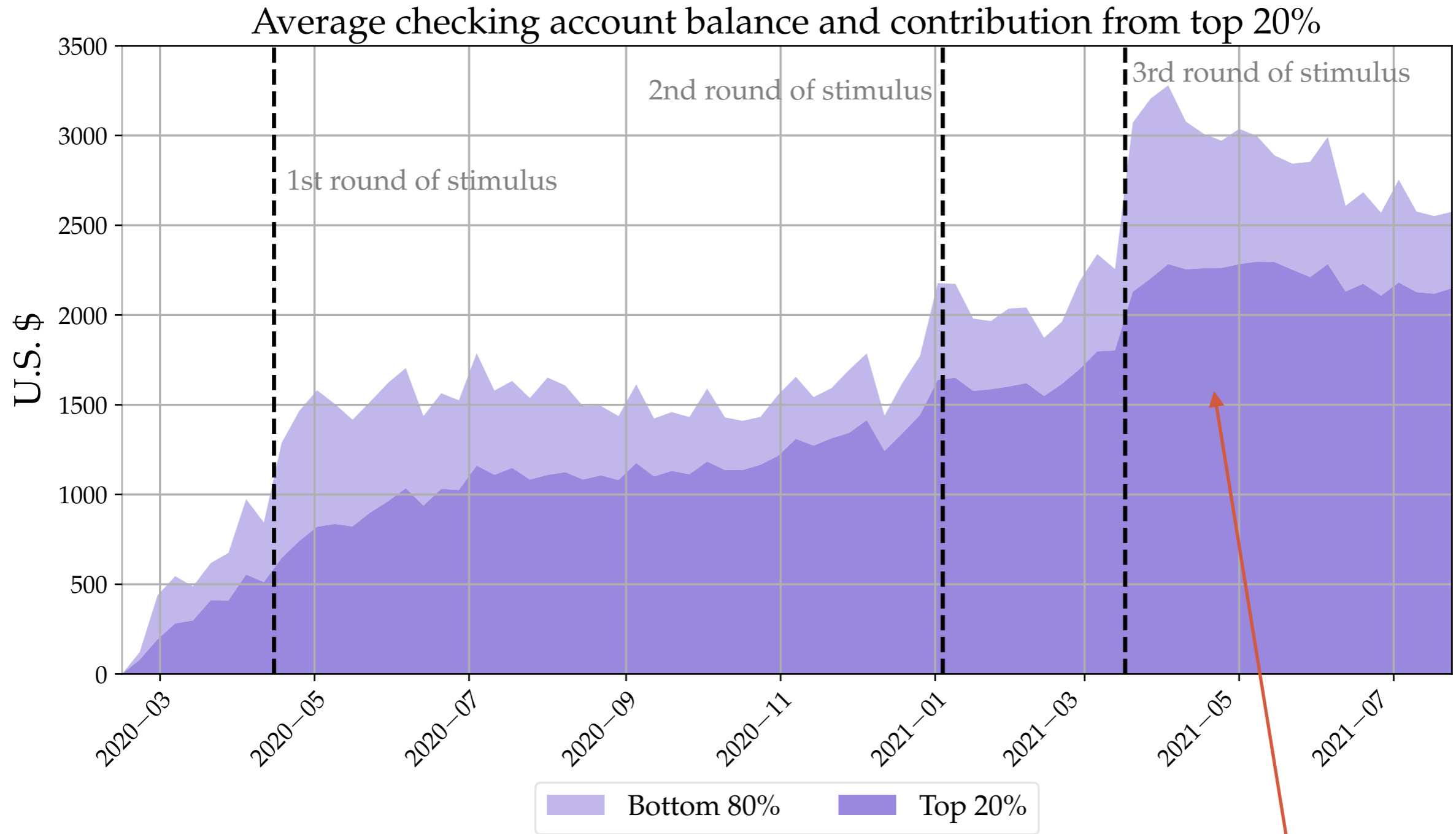
UNDER THE HOOD: EXCESS SAVINGS "FILTERING" DOWN TO SAVERS

Those with high MPCs spend, leaving bonds in the hands of those with low MPCs - so excess savings become steadily less potent for aggregate demand

FILTERING OF SAVINGS: EASY TO SEE IN THE DATA!

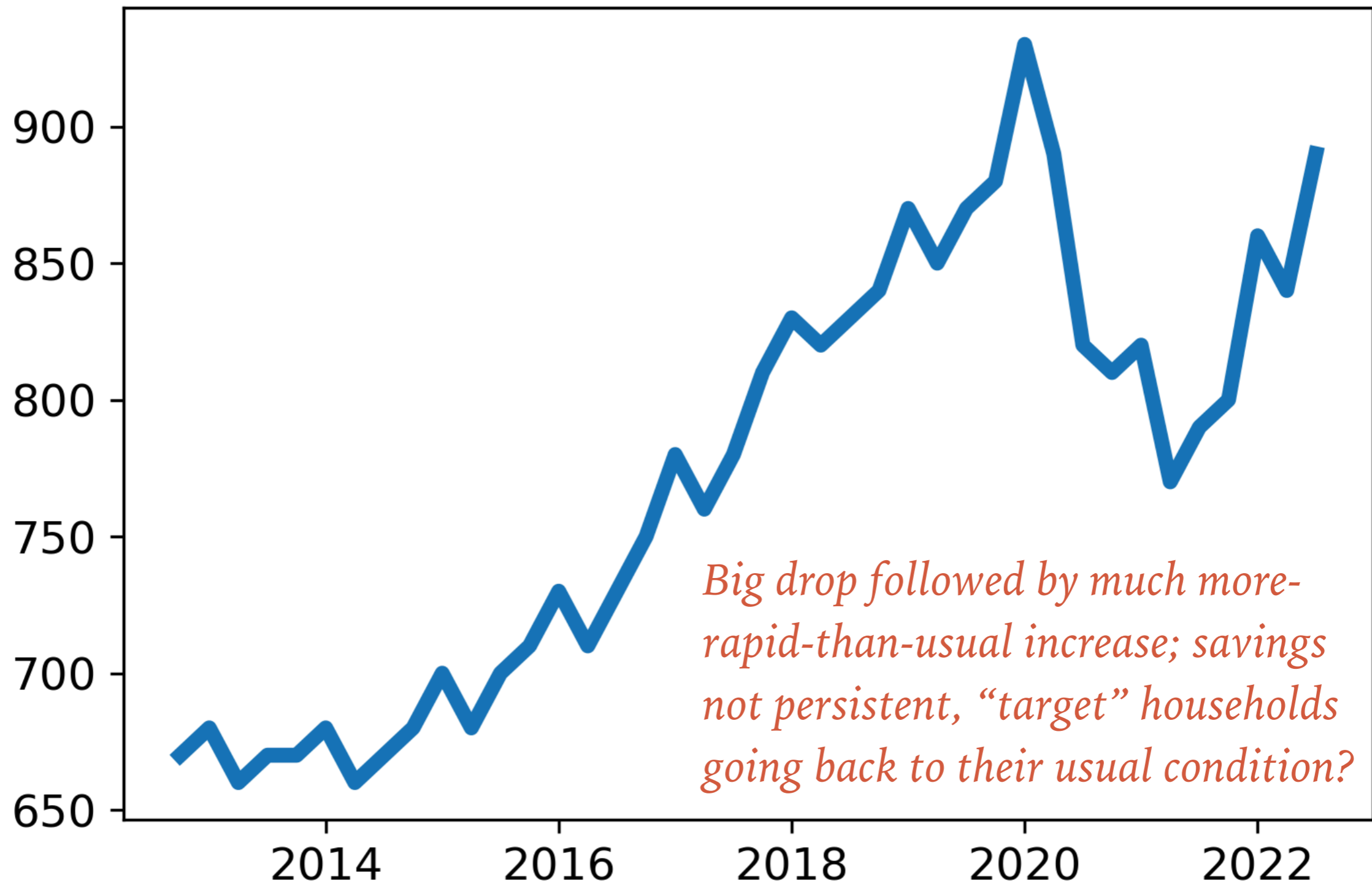Average checking account balance and contribution from top 20%

From Aggarwal, Auclert, Rognlie, Straub (2022), based on JP Morgan Chase data

Bottom-80% balances spike with checks, but dwindle; top-20% balances just keep growing!

# MORE FILTERING IN THE DATA: CREDIT CARD DEBT ROARING BACK?

Household credit card debt (in billions, NY Fed)

Big drop followed by much more-rapid-than-usual increase; savings not persistent, "target" households going back to their usual condition?

MODIFY OUR EXAMPLE TO GET LOWER MPCS

➤ Assume hand-to-mouth and target households temporarily have lower MPCs

   ➤ Hand-to-mouth: **0.5 instead of 1** for 4 quarters, then quickly phased-in recovery to 1

   ➤ Target: **0.1 instead of 0.2** for 4 quarters, then then quickly phased-in recovery to 1

➤ Could result endogenously from more liquidity, or from shock to consumption

SAME CUMULATIVE MULTIPLIER, BUT MUCH SLOWER-MOVING!
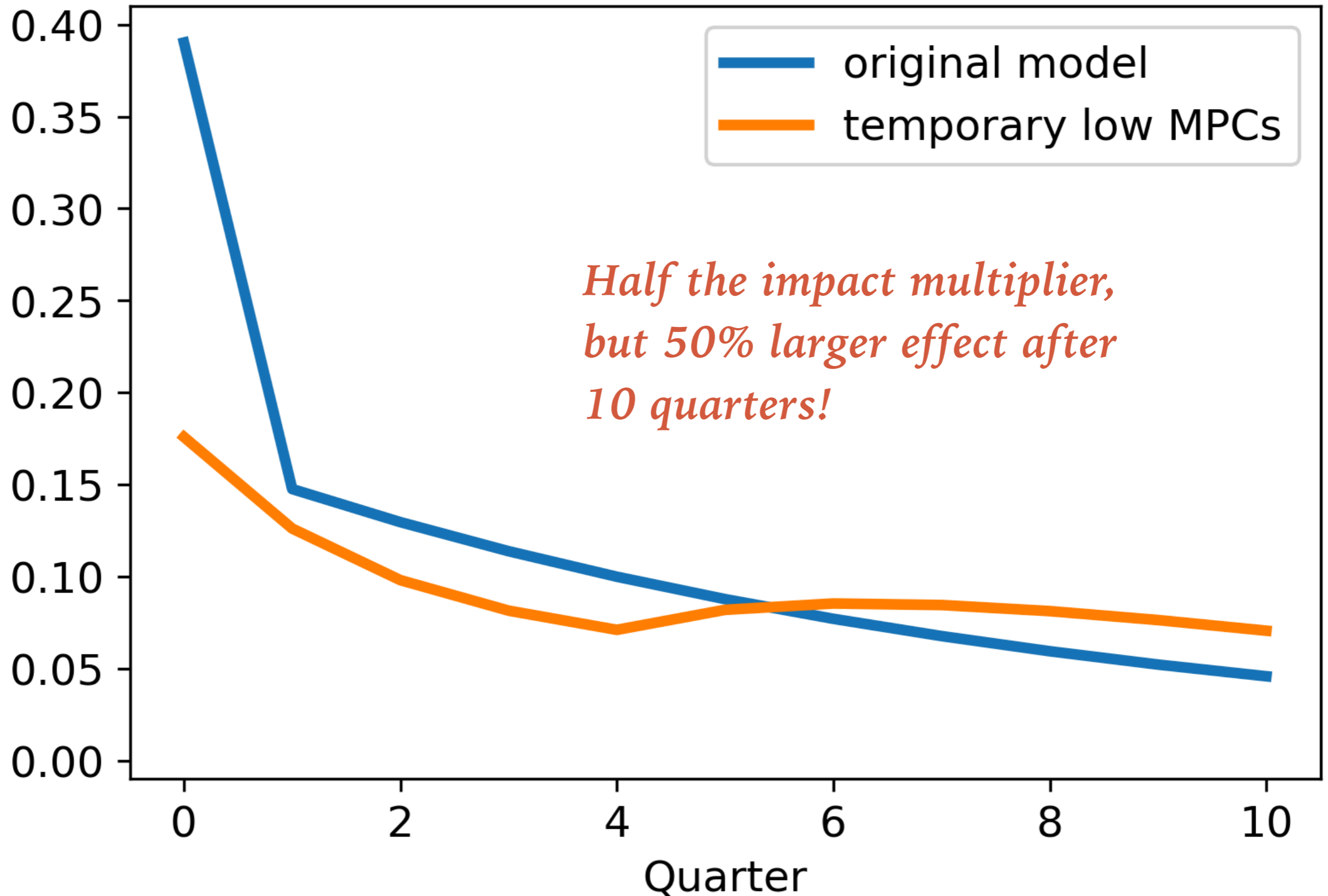
UNDER THE HOOD: SLOWER FILTERING OF EXCESS SAVINGS
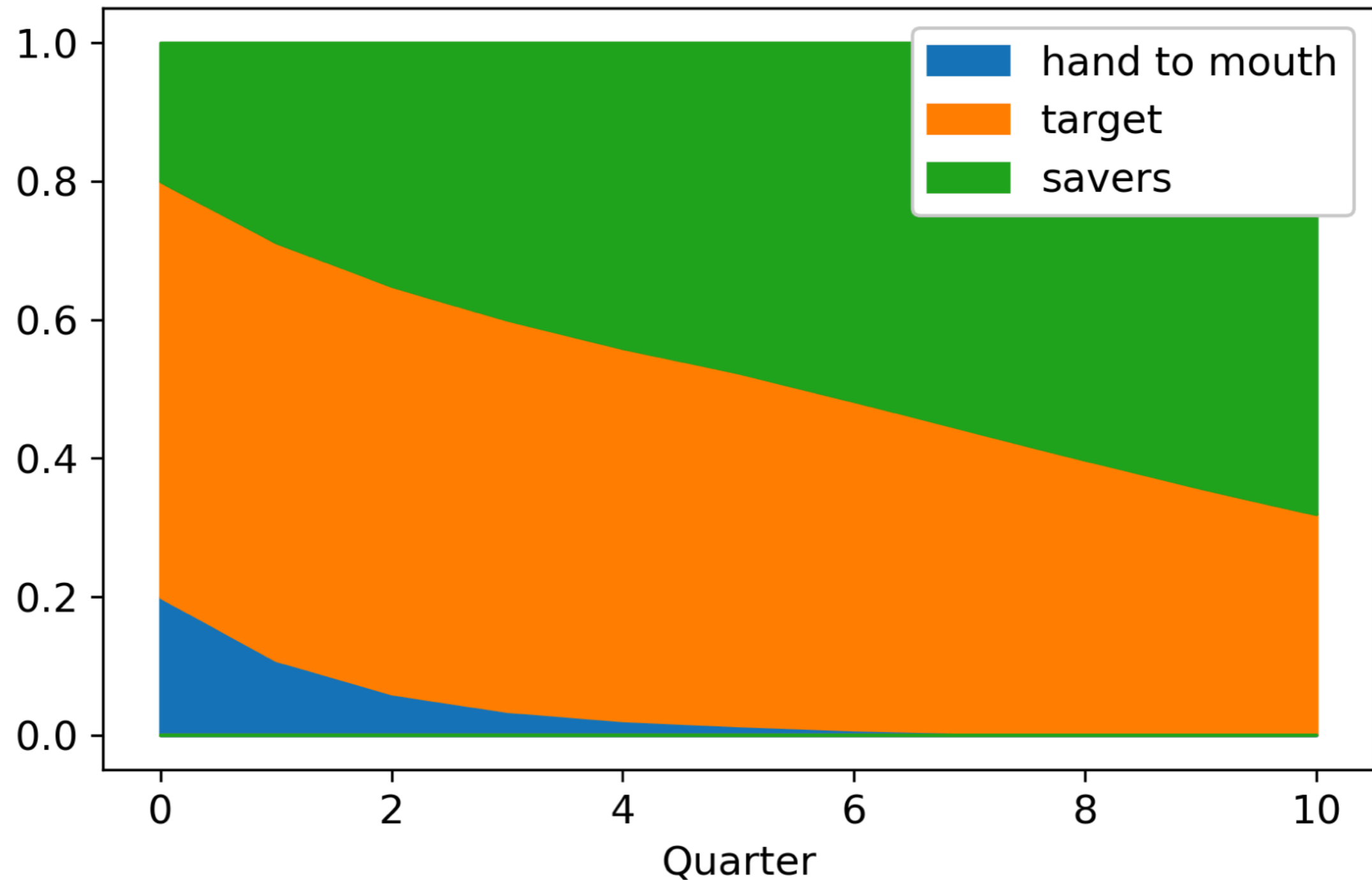
At 8 quarters non-savers still have 40% of excess savings, vs.
25% before - much more potent for aggregate demand!

THIS IS ONE NARRATIVE OF THE LAST 2.5 YEARS

➤ **Huge** fiscal interventions

   ➤ Some just provided relief, offset negative shock

   ➤ Didn't instantly create excess demand problem, because MPCs were (temporarily) low, and impact multipliers smaller than usual

➤ But this just meant **delay**, not a **diminished** multiplier

   ➤ Bigger **lagged** demand impact than usual, and we're suffering the inflationary consequences now

DID THIS EXAMPLE MISS SOMETHING?

➤ We gave "hand-to-mouth" and "target" households temporarily low MPCs, but assumed they would revert to type and consume excess savings

   ➤ unlikely they'll hold excess liquidity forever!

➤ Alternative view: if they don't spend out of extra income, maybe they'll stow it away in **long-run savings**?

BUT WHAT KIND OF LONG-RUN SAVINGS?

➤ Vehicle with the broadest potential is retirement accounts, but no big change apparent there

  ➤ e.g. "employee and employer 401(k) contributions remain relatively steady" - Munnell and Chen (2021)

➤ Two possibilities jump out:

  ➤ housing (e.g. using EIPs and excess savings more generally for down payments)

  ➤ retail stock market investment (see Greenwood, Laarits, Wurgler 2022)

  ➤ … and both the housing and stock markets surged!

NEEDED: LOOKING BEYOND THE CONVENTIONAL MPC

➤ Gabaix and Koijen "inelastic markets hypothesis": investing $1 in stock market increases aggregate value by $5

    ➤ … likely some (3%-7%) MPC out of that capital gain

➤ Saving in equity or housing, rather than consuming, doesn't avoid pressure on aggregate demand—it's just redirected!

$$dY_0 = \frac{1}{1 - MPC - \mathbf{z'MPS}} \left(\partial C + \mathbf{z'} \partial \mathbf{A} \right)$$

*From work in progress by Auclert, Rognlie, Straub, Wu: in a simple setting, the aggregate multiplier isn't just 1/(1-MPC), but depends on **pass-through coefficients z** - how much, ultimately, of $1 invested in an asset finds its way back to aggregate demand*

CONCLUDING THOUGHTS

➤ Great paper, capping many years of important work

➤ MPCs during the crisis were lower than usual

  ➤ but maybe spending just **delayed**

  ➤ and maybe **redirected** toward booming asset markets

  ➤ … both with consequences today

➤ Agenda going forward: to understand the full multiplier process, study flows **across time** and **across assets**