Discussion of

PRICE LEVEL TARGETING AND THE FINANCIAL ACCELERATOR: WELFARE ANALYSIS IN AN OPEN ECONOMY DSGE MODEL

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"... really would have enjoyed to read the paper..."

PT in NK framework

In standard NK framework,
PT approximates characteristics of
the first best solution (commitment)

Reduces output-inflation trade-off

Question: Can PT help achieving higher welfare in richer model?

- DMZ check it in a model with *CREDIT FRICTIONS (BGG)*

- Why interesting? Adding NOMINAL CONTRACTS to BGG, there exists additional channel:

  EX-POST VALUE OF REAL DEBT

  Wealth redistribution effect out of unexpected change in P

"...could minimize the allocative distortion generated by the debt-deflation channel and improve welfare."

YES, IT IS REASONABLE…

…BUT RESULTS SORT OF FALL SHORT OF EXPECTATIONS

Model for Canadian economy

- S.O.E. with lots of agents (H&F, T&NT) with some market power, setting prices, wages…

  BGG external finance premium with 'financial' shocks $\Psi_t^j(\cdot) = \left(\dfrac{X_{j,t}}{q_{j,t}K_{j,t+1}}\right)^{-\psi_j}$

WATCH OUT: THESE ψ_j

MATTER A LOT FOR REAL VBLS IN VAR. DECOMP.!!

No borrowing constraint on HHs'

Bank of Canada 1: Meh–RiosRull–Terajima '08

SIZEABLE YOUNG CANADIAN HOUSEHOLDS (MORTGAGE) DEBT

Table 1: Household Positions as % of Net Worth, 2005

Age cohort	≤ 35	36–45	46–55	56–65	66–75	≥76
All households						
Short-term	3.91	-1.76	0.43	1.34	8.11	11.44
Long-term	-33.92	-2.22	16.37	25.08	24.03	25.41
Real	130.01	103.98	83.20	73.58	67.86	63.14
Rich households						
Short-term	2.90	-4.30	-2.96	-3.26	7.45	7.22
Long-term	1.68	18.03	30.26	32.98	27.63	30.21
Real	95.42	86.27	72.70	70.28	64.92	62.56
Middle-class households						
Short-term	5.05	1.39	3.32	4.52	8.27	14.40
Long-term	-91.92	-26.68	4.70	19.22	22.70	22.65
Real	186.88	125.28	91.98	76.26	69.03	62.95
Poor households						
Short-term	16.88	-1.50	6.18	13.57	13.13	11.10
Long-term	-58.69	-19.01	-9.06	10.32	5.31	16.10
Real	141.81	120.52	102.88	76.11	81.56	72.80

So I wonder why Caterina didn't resort to

Bank of Canada 2: Christensen–Corrigan–MENDICINO–Nishiyama '07

Borrowing constrained impatient HHs'

(well, we Central Banks economists know why,
but we cannot tell in public…)

Actually, such a model of their sort is also a simple model to analyze the effects of credit and banking on business cycles (Gerali,Neri,Sessa,Signoretti '08)

Strategy for welfare analysis (SGU)

max Welfare

α_π, α_Y

s.t. FOCs & equilibrium conditions

$$R_t = \alpha_\pi \pi_t + \alpha_Y y_t$$

why not directly instead:

$$R_t = \alpha_\pi \pi_t + \alpha_Y y_t + \alpha_R R_{t-1} \qquad ??$$

relevant!

Caterina's welfare comparisons

Table 1.a.Welfare Cost of ad-hoc rules IT

		welfare	welfare cost
estimated	$\varrho_\pi=0.0277,\ \varrho_y=0.4722, \varrho_R=0.8138$	-2.2858	-1.058
optimal	$\varrho_\pi=6.5,\ \varrho_y=0.5, \varrho_R=0.8138$	-2.2810	-0.749
	$\varrho_\pi=6.5,\ \varrho_y=0.5,\ \varrho_R=\mathbf{0}$	-2.2819	-0.804

not
<u>optimal!</u>

PT vs IT

		IT	PT
constrained max	$\varrho_R=0$	$\varrho_\pi=20,\ \varrho_y=1.5$	$\varrho_P=5,\ \varrho_y=3$
	welfare	-2.2814	-2.2803
	welfare cost	-0.776	-0.702

$\rho_R=0$ is neatest case to see the advantages of stationarity+history dependence that PT induces, but with optimal ρ_R IT could improve more than PT

Why? Because high ρ_R introduces some history dependence also with IT

PT vs IT

	IT	PT
$\varrho_R=0.8138$	$\varrho_\pi=6.5,\ \varrho_y=0.5$	$\varrho_P=2.5,\ \varrho_y=1.5$
welfare	-2.2810	-2.2803
welfare cost	-0.749	-0.700
	lower cost	same cost

GAINS of PT with respect to IT seem SMALL

(and they could be even smaller with optimal ρ_R)

Uncertainty (Mispecification) and Welfare

Iskrev '08: unavoidable mispecification in medium-scale models, unaffecting IRFs, but affecting welfare

With such small gain margins, Caterina's welfare ranking could be unsafe...

How to improve gains of moving from IT?

Model is S.O.E. with domestic and FOREIGN debt, denominated in foreign currency: targeting the exchange rate could eliminate the other source of ex-post variability of real borrowers liabilities

Foreign interest rate shock explains 65.9% of variability of debt!

Where did all *yesterday* inflation variability trade–off go?

Level effect and stabilization effect IT vs PT

	$\varrho_\pi=6.5,\ \varrho_y=0.5$	$\varrho_P=2.5,\ \varrho_y=1.5$	
$\sigma(c)$	1.73	1.73	
$\mu(c)$	0.6610	0.6612	
$\sigma(rr)$	0.60	**0.49**	gain
$\mu(rr)$	1.0091	1.0091	
$\sigma(\pi)$	0.79	0.80	0.01 trade–off?
$\mu(\pi)$	1.0090	1.0089	

And asymmetries?...

– From relaxing/tightening the borrowing constraint for people with different willingness to consume

  – Demand vs. Supply shocks

Another way to tackle comparison:
COUNTERFACTUAL EXPERIMENT

1. estimate model over period of IT
2. extract shocks
3. modify the monetary regime
4. simulate the model adding those shocks
5. compare variances of key macro vbls in data
   vs. counterfactual

Conclusion

I liked the paper, but if the Bank of Canada could remember more of himself, I would like it even better