

— —

,

: DSGE

0

2020 5 7

(2019)^[1]

2014

"

"

19BJL122

(1994-),

Email

1379742421@qq.com

18817938634

100 6

200234

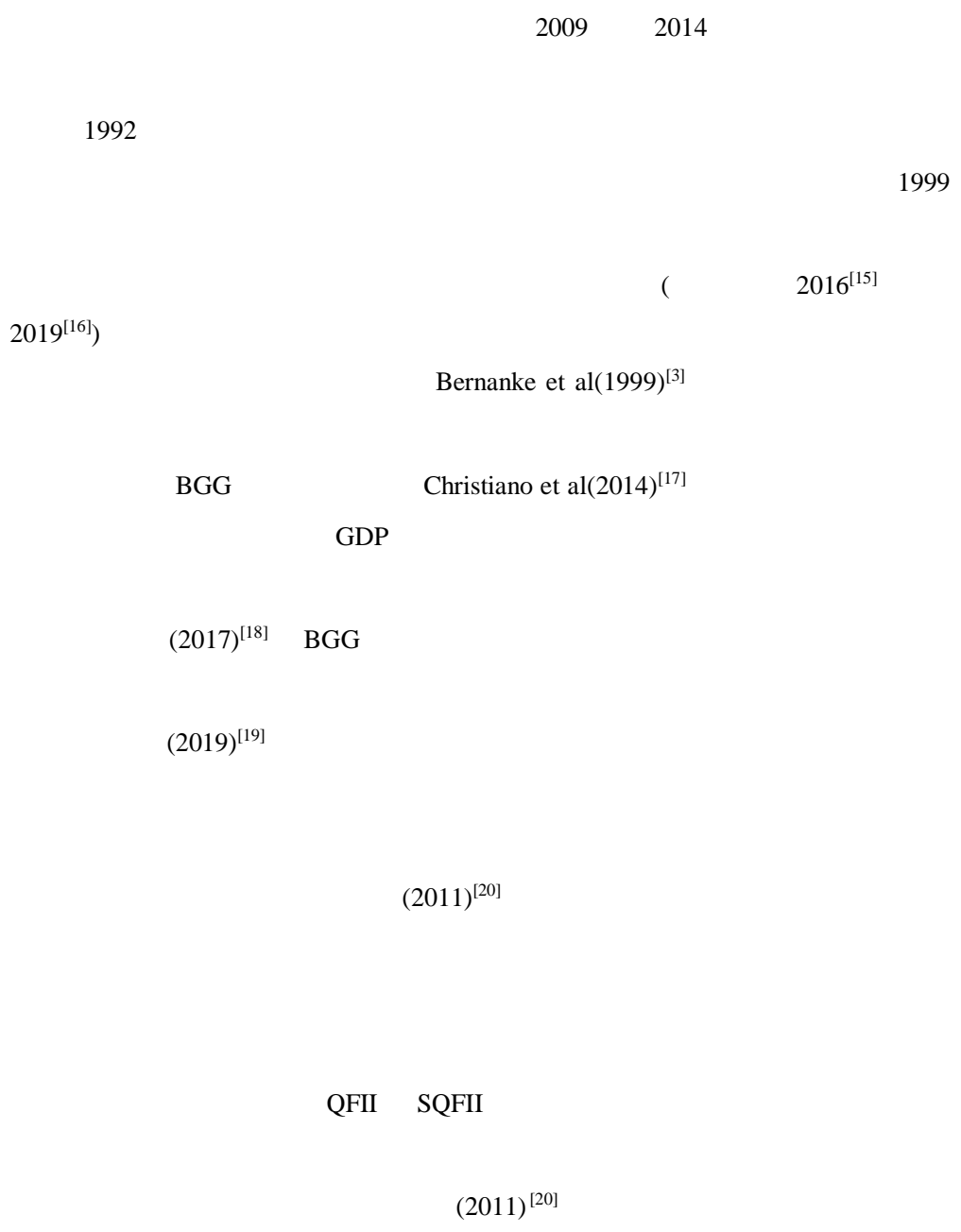
Stiglitz(1989)^[4]

Hu(1998)^[5]

Liu(2009)^[6]

Hanke et al.(2010)^[7]

Xu(2010)^[8]



DSGE

()

τ

$$\max E_0 \sum_{t=0}^{\infty} \beta^t (\ln C_t - \xi \ln H_t)$$

(1)

C_t H_t

ξ

β

D-S

$$C_t = [(1-\nu)^{\frac{1}{\eta}} C_{H,t}^{\frac{\eta-1}{\eta}} + \nu^{\frac{1}{\eta}} C_{F,t}^{\frac{\eta-1}{\eta}}]^{\frac{\eta}{\eta-1}}$$

(2)

$$C_{H,t} = \left(\int_0^1 C_{H,t}(i)^{\frac{\varepsilon-1}{\varepsilon}} di \right)^{\frac{\varepsilon}{\varepsilon-1}} \tag{3}$$

$$C_{F,t} = \left(\int_0^1 C_{F,t}(i)^{\frac{\varepsilon-1}{\varepsilon}} di \right)^{\frac{\varepsilon}{\varepsilon-1}} \tag{4}$$

$C_{H,t}$ $C_{F,t}$

ν

η

ε

$$C_{H,t}(i) = \left(\frac{P_{H,t}(i)}{P_{H,t}} \right)^{-\varepsilon} C_{H,t} \quad , \quad C_{F,t}(i) = \left(\frac{P_{F,t}(i)}{P_{F,t}} \right)^{-\varepsilon} C_{F,t}$$

(5)

$$C_{H,t} = (1-\nu) \left(\frac{P_{H,t}}{P_t} \right)^{-\eta} C_t \quad C_{F,t} = \nu \left(\frac{P_{F,t}}{P_t} \right)^{-\eta} C_t \tag{6}$$

$$P_t = [(1-\nu)P_{H,t}^{1-\eta} + \nu P_{F,t}^{1-\eta}]^{\frac{1}{1-\eta}} \quad (7)$$

$$(6) \quad \begin{matrix} P_{H,t} & & P_{F,t} & & P_t \end{matrix}$$

(8):

$$P_t C_t = W_t^H H_t - T_t + \Pi_t + R_t D_t - D_{t+1} \quad (8)$$

$$W_t^H \quad T_t \quad \Pi_t$$

$$D_t \quad R_t$$

$$\frac{1}{C_t} = \beta E_t \left\{ \frac{1}{C_{t+1}} \frac{P_t}{P_{t+1}} \right\} R_{t+1} \quad (9)$$

$$\frac{W_t^H}{P_t} = C_t H_t \quad (10)$$

$$(9) \quad (10)$$

$$Y_t = \left(\int_0^1 Y_t(i)^{\frac{\varepsilon-1}{\varepsilon}} di \right)^{\frac{\varepsilon}{\varepsilon-1}} \quad P_t = \left(\int_0^1 P_t(i)^{1-\varepsilon} di \right)^{\frac{1}{1-\varepsilon}} \quad (11)$$

$$Y_t(i) = \left(\frac{P_t(i)}{P_t} \right)^{-\varepsilon} Y_t \quad (12)$$

(12)

Calvo(1983)^[21]

1- θ

$$\sum_{k=0}^{\infty} \theta^k E_{t-k} \left[\beta^k \frac{C_t}{C_{t+k}} \frac{P_t^\Delta - P_{t+k}^w}{P_{t+k}} Y_{t+k}^\Delta(i) \right] \quad (13)$$

$$(12) \quad P_{t+k}^w = P_t / X_t \quad P_t^\Delta$$

$$P_t = [\theta P_{t-1}^{1-\varepsilon} + (1-\theta)(P_t^\Delta)^{1-\varepsilon}]^{\frac{1}{1-\varepsilon}} \quad (14)$$

(12)(13)(14)

(15)

$$\pi_t \quad x_t$$

B,Z ,B Z B Z

N.

$$e_{t-1} Q_t^* K_{t,N}^* = (N + B_{H,t}^N)(1 - \tau) \tag{16}$$

$e_t Q_t^* K_{t,N}^*$

τ

ω

$$K_{t,N}^* \sim \omega K_{t,N}^*$$

ω

ϖ

$$e_t Q_t^* R_t^* \varpi K_{t,N}^* (1 - \tau) = B_{H,t}^N Z_{H,t} \tag{17}$$

R_t^*

(19), (23),

$$\Gamma_t'(\varpi) - \lambda_t[\Gamma_t'(\varpi) - \mu G_t(\varpi)] = 0 \quad (24)$$

$$[1 - \Gamma_t(\varpi)]R_t^* e_t(1 - \tau) + \lambda_t\{[\Gamma_t(\varpi) - \mu G_t(\varpi)]R_t^* e_t(1 - \tau)\} - \lambda_t \frac{R_t e_{t-1}}{1 - \tau} = 0 \quad (25)$$

$$(\Gamma_t(\varpi) - \mu G_t(\varpi))R_t^* Q_t^* K_t^* e_t(1 - \tau) = R_t \left(\frac{e_{t-1} Q_t^* K_t^*}{1 - \tau} - N_t \right) \quad (26)$$

$$\frac{e_{t-1} Q_t^* K_{t,N}^*}{1 - \tau} \tau$$

$$e_t Q_t^* R_t^* \varpi K_{t,N}^* \tau$$

$$Y_t = A_t (K_t^H)^{\alpha \Omega_k} (K_t^*)^{\alpha(1 - \Omega_k)} (H_t)^{(1 - \alpha)\Omega_L} (H_t^e)^{(1 - \alpha)(1 - \Omega_L)} \quad (27)$$

δ_F

$$E\{R_t^*\} = E\left\{ \frac{\frac{1}{X_t} \frac{\alpha(1 - \Omega_k) Y_t}{K_t^*} + (1 - \delta_F)}{Q_{t-1}^*} \right\} \quad (28)$$

$$V_t \quad W_t^e \quad \gamma$$

$$N_t = \gamma V_t + W_t^e \quad (29)$$

$$V_t = R_t^* Q_{t-1}^* K_t^* e_t(1 - \tau) - \left[R_t + \frac{\mu \int_0^{\varpi} R_t^* Q_{t-1}^* K_t^* e_t(1 - \tau) dF(\omega)}{\frac{e_{t-1} Q_{t-1}^* K_t^*}{1 - \tau} - N_{t-1}} \right] \left(\frac{e_{t-1} Q_{t-1}^* K_t^*}{1 - \tau} - N_{t-1} \right) \quad 30$$

$$C_{F,t} = \nu \left(\frac{P_{F,t}}{P_t} \right)^{-\eta} C_t \quad (31)$$

$$EX_t = \nu \left(\frac{P_{H,t}}{P_{F,t}} \right)^{-\eta} C_t^F \quad (32)$$

$P_{F,t}$

C_t^F

$$G_t = \frac{M_t - M_{t-1}}{P_t} + T_t \quad (33)$$

$$\ln\left(\frac{R_t}{R}\right) = \rho_r \ln\left(\frac{R_{t-1}}{R}\right) + \rho_Y \ln\left(\frac{Y_t}{Y}\right) + \rho_\Pi \ln\left(\frac{\Pi_t}{\Pi}\right) + e \quad (34)$$

$$Y_t = C_{H,t} + EX_t + I_t + G_t + \mu \int_0^{\bar{\omega}} R_t^* Q_{t-1}^* K_t^* e_t (1-\tau) dF(\omega) + \frac{e_{t-1} Q_t^* K_{t,N}^*}{1-\tau} \tau + e_t Q_t^* R_t^* \bar{\omega} K_{t,N}^* \tau \quad (35)$$

(35)

AR(1)

1

			()
γ	0.6		[17]
Ω_L	0.7		
Ω_K	0.6		
μ	0.1		[17]
δ_H	0.025	(2017)	[18]
δ_F	0.025		
τ	0.01		
ρ_R	0.7	(2019)	[19]
ρ_Y			[24]
ρ_{Π}			[1]

	Gali(2003) [23]	(2011) [27]	(2011)
[22]	0.9	0.02.	

($\tau=0$)

($\tau=0.01$)

19.4%

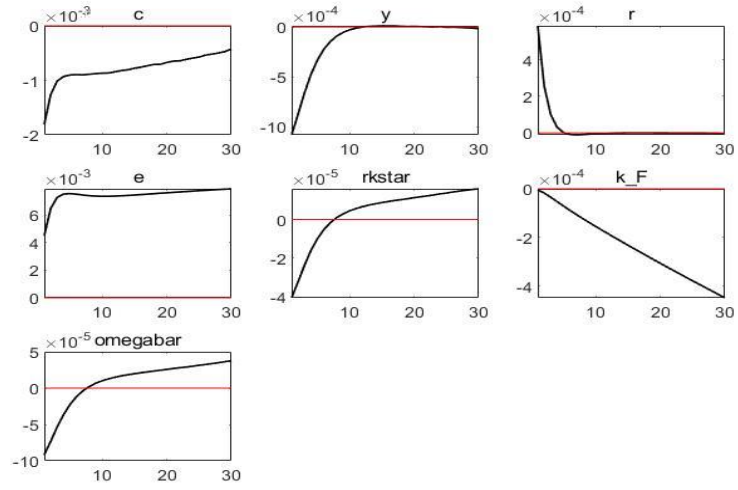
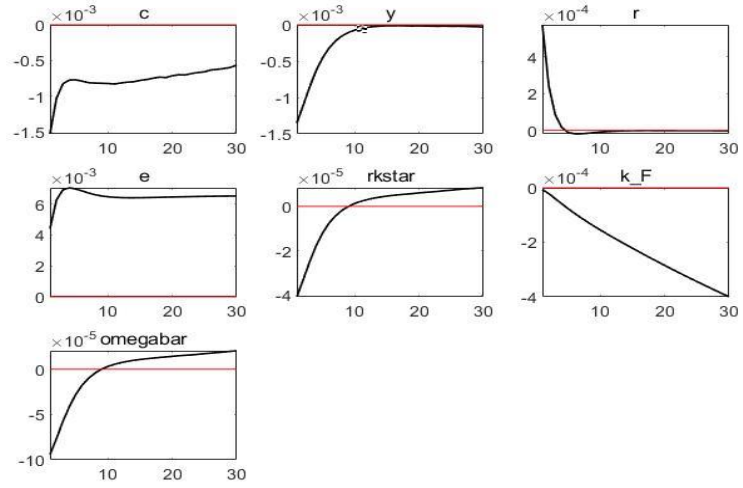
($\tau=0$)

(2).

19.7%

1

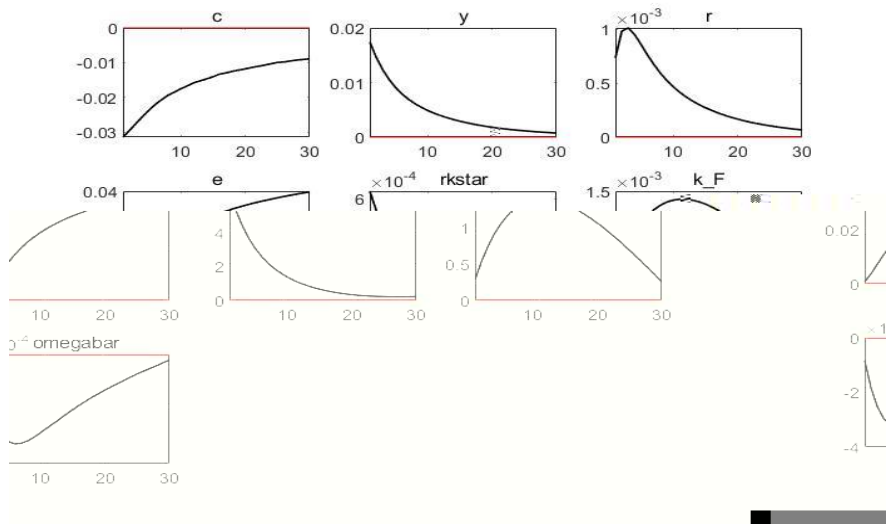
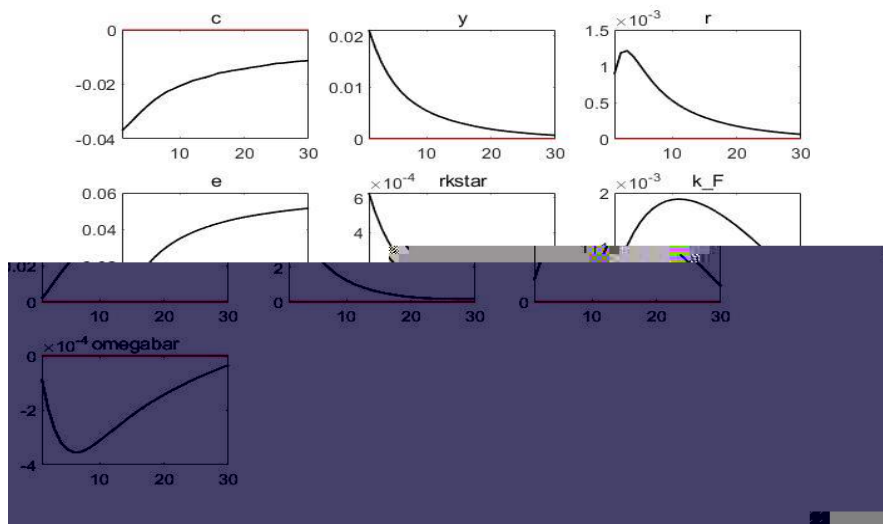
1 2



2

3

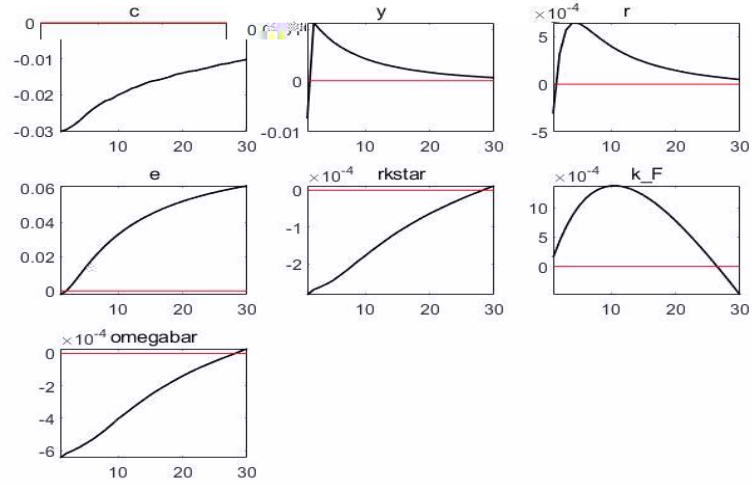
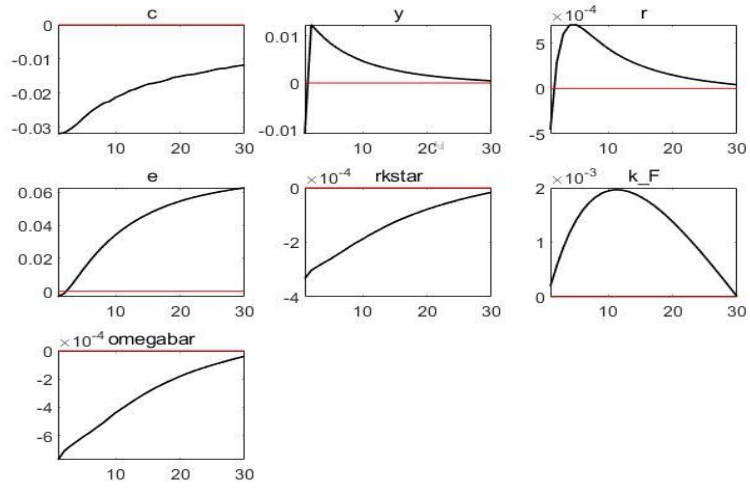
4



3

5

6

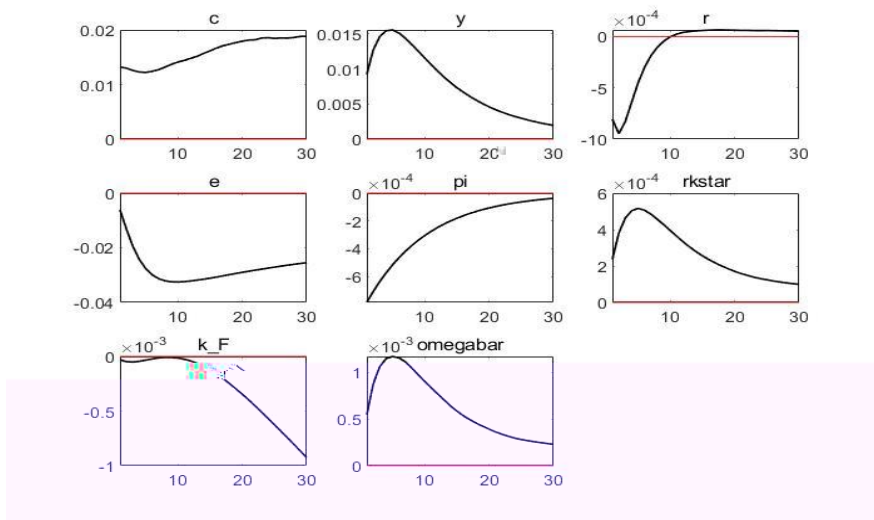
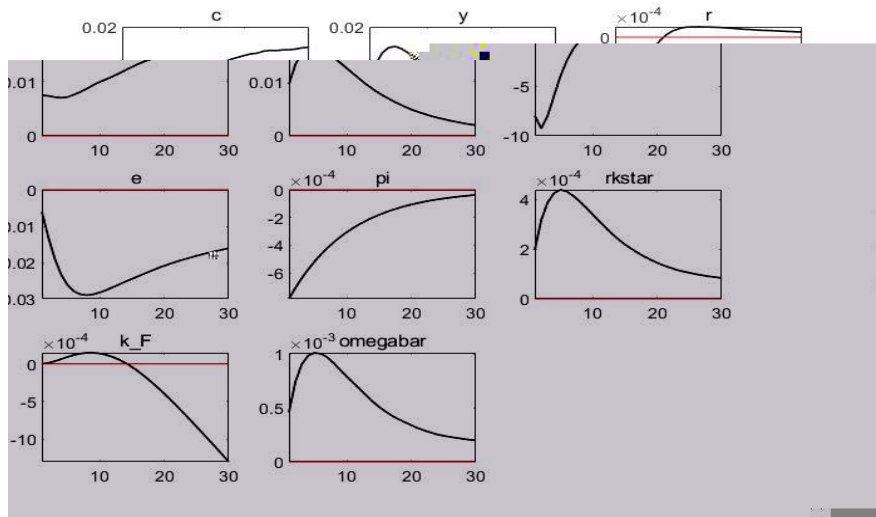


4

7

8

3



- [1] DSGE [J]. ,2019, 45(01):135-152.
- [2] Tobin, J. A., Proposal for International Monetary Reform[J]. *Eastern Economic Journal*, 1987, 4(04): 153-159.
- [3] Bernanke, B.S., Gertler, M. and Gilchrist, S., Chapter 21 The financial accelerator in a quantitative business cycle framework[M], in *Handbook of Macroeconomics*, 1999: 1341-1393.
- [4] Stiglitz, J. E., Using Tax Policy to Curb Speculative Short-term Trading[J]. *Journal of Financial Services Research*,1989, 3(23): 101-115.
- [5] Hu, S., The Effects of the Stock Transaction Tax on the Stock Market Experiences from Asian Markets[J]. *Pacific-Basin Finance Journal*, 1998, 6(34):347-364.
- [6] Liu, S., Zhu, Z.,Transaction Costs and Price Volatility: New Evidence from the Tokyo Stock Exchange[J]. *Journal of Financial Services Research*,2009, 36(01): 65-83.
- [7] Hanke, M., Huber J., Kirchler, M. and Sutter, M., The Economic Consequences of A Tobin Tax An Experimental Analysis[J]. *Journal of Economic Behavior & Organization*, 2010, 74(12):58-71.
- [8] Xu J., Noise traders, exchange rate disconnect puzzle, and the Tobin tax[J]. *Journal of International Money and Finance*,2010. 29 2 : 336-357.
- [9] , [J]. , 2020, 37(03):159-166.
- [10] Kirchler M., Huber J., Kleinlercher D., Market microstructure matters when imposing a Tobin tax—Evidence from the lab[J]. *Journal of Economic Behavior & Organization*, 2011, 80(03): 586-602.

[11] Becchetti L., Ferrari M., Trenta U., The impact of the French Tobin tax[J]. Journal of Financial Stability, 2014, 15(35): 127-148.

[12] Chen H., A Tobin tax only on sellers[J]. Finance Research Letters,2016,19(03): 83-89,

[13] Deng Y., Liu X., Wei S.. One fundamental and two taxes: When does a Tobin tax reduce financial price volatility?[J]. Journal of Financial Economics, 2018, 130(03): 663-692.

[14] , . : ? [J]. ,2011, (09):1-9.

[15] , , . , 2016, (13):71-73.

[16] , . : . [J], 2019, 21(04):23-33.

[17] Christiano L. J., Motto R., Rostagno M., Risk Shocks[J]. American Economic Review, 2014, 104(01):27-65.

[18] , , . — — BGG-DSGE [J]. , 2017, (10): 20-35+187.

[19] , . — — [J]. , 2019, (03):18-36.

[20] , , . [J]. , 2011. 46(01): 57-70+139.

[21] Calvo, G.A. ,Staggered prices in a utility-maximizing framework[J]. Journal of Monetary Economics, 1983, 12(03):383-398.

[22] , , [J]. , 2011, 46(11): 73-88.

[23] Galí J., Tommaso, M . Monetary Policy and Exchange Rate Volatility in a Small Open Economy[J]. The Review of Economic Studies,2003, 72(3):707-734.

[24] Chang, C., Liu Z.. Spiegel M.M. Capital controls and optimal Chinese monetary policy[J]. Journal of Monetary Economics, 2015, (74): 1-15.

Abstract: This paper expands the financial acceleration mechanism to an open economic model and builds a foreign risk asset trading department. The Tobin tax is levied on foreign risky asset transactions, and the effects of the Tobin tax are analyzed from four economic shock perspectives. In response to foreign macroeconomic shocks, the Tobin tax has served as a buffer to prevent the domestic economy from overheating or a rapid recession. In response to other forms of economic shocks, the Tobin tax will not have a significant impact on the domestic macro-economy, and it will also exercise market regulation on foreign exchange capital projects.

Key words: Tobin tax; Financial acceleration mechanism; DSGE; Capital control.