

1 涓瘁浼賤吁鑰飲袷浜 x 殒錡忔嘔鐳崇榔

盤变箬缙底涑FOF鍆洪嚕鑽勸凸壁涓昏 婧�悝箬錚昏俐嚕甯倣滿鑽勸茨灞缙底涑閫囩  
 憊闖曄笱闖爰嫻灔啗吁鑰俐嚕璁〃 垵盤盪B(Defined Benefit) Plan杞 慳DC(Defined Con-  
 tribute) Plan, 澧烺え浜啗吁鑰俐嚕鐈疊袷鎢鑽�攲璧�劭渼姇鑰�嬌OF鍆洪嚕浠�瀹�涓�槽敕  
 鏄娒ũ 淪氦俐 闂十筭娆〃 垶鐤 g 殊鍆洪嚕, 鐤 玿鑾楀垜浜�鳴繳浜漉 鍰儿雙璧勵呼殊闌  
 擊凅. 涓�壓潰, 錄十敷褰 岨鐤版堪拏撲腑FOF鍆洪嚕璧�劭駭鎢婚嘶鍛軒吁鑰俐嚕璧�劭駭鎢  
 婚嘶鑽勸 拏≡暘鋋漢節OF鍆洪嚕甯倣滿涓�吁鑰俐嚕甯倣滿杓漉 銍�瓛錄喫漉. 鏽007-  
 2016銍佺勾涓�浜啗吁殊緇潰 鐤伴嘶鍛軒 關跨崑鑾楀癡瘥嬾城濡倣渼 1:

漢FOF<sub>t</sub>鍛Retire<sub>t</sub>辜忦垠錄喟垠杓浼 銻矇綬鏢規 楠岔佞DF妨楠岔拊Phillips欽揚erron鑽  
勤栢鏽滄棧鎒簡簡鋤燴忦璁擻紙銻矇綬鏢硅繃緋嬪級, 寒朵苡Kwiatkowski欽揚hillips欽搢chmidt欽  
搢hin妨楠岔出栢鏽滄娑縑淺簡鋤燴忦璁擻紙寒崇ŭ 杓囡▼銻鏗豹 鎒 互璁や負FOF<sub>t</sub>鍛Retire<sub>t</sub>鐫  
潛寒崇ŭ 辜忦垠. 縑x画漢瑰畠浹 殒宸 垠辜忦垠ΔFOF<sub>t</sub>鍛ΔRetire<sub>t</sub>杓浼 銻矇綬鏢規  
楠岔紙琛■?? 銻鏗梟垠鑽勤栢鏽� " 鐫徠畠浹 櫛寒崇ŭ 辜忦垠鉅俗壑浹 FOF<sub>t</sub>鍛Retire<sub>t</sub>錄  
喟垠鐫涓I(1)Φ<sub>α0</sub>"s5`~^6J"9

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1 \begin{table}[]
2 \centering
3 \caption{錦暉綬燦規 楠窮{
4 \label{tb:3-adf}
5 \begin{tabular}{l | lll} \hline \hline
6 TEST Method & ADF & KPSS & PP & \hline
7 FOF & 2.53 & 1.07 & -0.16 & \hline
8 diff(FOF) & -3.4 & 0.11 & 40 & \hline
9 Retire & 1.64 & 1.01 & 0.23 & \hline
10 diff(Retire) & -2.31 & 0.18 & 1.55 & \hline
11 10pct & -1.61 & 0.35 & * & \hline
12 5pct & -1.95 & 0.46 & 0.26 & \hline
13 1pct & -2.62 & 0.74 & * & \hline
14 \end{tabular}
15 \end{table}

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棣桷廐，浣跨黠鍾灝忒簍涳磳浼拌 濡備笏鑑圭▼：

$$FOF_t = \alpha + \beta \cdot Retire_t + \mu_t$$

寰楸垠 $\alpha$ 鍛 $\beta$ 鑽劭及璵 $\phi$ 嘶 $\hat{\alpha}$ 鍛 $\Delta e'$ ??>°

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1      \begin{table}[ht]
2          \centering
3          \caption{洗牌 閼弼OLS}
4          \label{tab:coin-OLS-estimate}
5          \begin{tabular}{l | rrrr} \hline \hline
6              Coefficients: & Estimate & Std. Error & t value & Pr(>|t|) \\ \hline
7              (Intercept) & -7.552e+02 & 5.632e+01 & -13.41 & 5.51e-16*** \\
8              Retire & 1.524e-01 & 5.042e-03 & 30.22 & <2e-16*** \\ \hline \hline
9          \end{tabular}
10     \end{table}

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漢規畫宸 及聰" 簪錄<sub>t</sub>杓浣 錦矇綬鏢規 楠  $\hat{\mu}_t$  鏹`DF妨楠軒抵PP妨楠屺腑鏹掎糴浜  
 喟珥鏹 $\angle$  崙浣嘈牴鐳勳師鍋囙 , 鏹 $\searrow$  PSS妨楠屺腑鏹 $\cup$  彈浜喟簪錄杓钩紛崇焄鏹燿 $\cap$  聰鏹  
 狗 鑒 互聰や负 $FOF_t$ 鍛Retire<sub>t</sub>涓や釜 $I(1)$ 杓囙▼ 褰杓垠浜喟钩紛崇焄 $I(0)$  杓囙▼. 鏹充  
 袂涓 簪錄榆籓閨村珥鏹 $\mid$  涓閨拑馮鐳勳澈琛" 另緋伙紙銘忆嘸錫崇榔鑄鏹忆嘸錫戰嘶涓(1,  
 -0.15).0?? $\geq$ °

1	<code>\begin{table}[ht]</code>
2	<code>\centering</code>

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3      \caption{洗拌  變嬌樊鑽勳崙浣嶸低奶楠竊OLS}
4      \label{tab:coin-OLS-resid-uniroot}
5      \begin{tabular}{l | cccc} \hline \hline
6          Tests          & ADF-Test          & KPSS-Test          & PP-Test          & \\
7          \hline
8          Statistics     & -3.1799 (<1pct) & 0.2674(<10pct) & -10.0379 (<Z-tau) & \\
9          \hline \hline
10         \end{tabular}
11     \end{table}

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聰 $y_t = FOF_t$ ,  $x_t = Retire_t$ , 寤虹珣璇 樊淇 妯" 瀾. 鑿變銘浣跨駁鑽勳嶸瀛 e 害鑽  
版崙, 鎵涔 2 姑鏄 $\Delta y_t$ 鑽-4閿舵棋錫序」.

$$\Delta y_t = \alpha_1 \cdot \Delta y_{t-1} + \alpha_2 \cdot \Delta y_{t-2} + \alpha_3 \cdot \Delta y_{t-3} + \alpha_4 \cdot \Delta y_{t-4} + \beta_0 \cdot \Delta x_t + \beta_1 \cdot \Delta x_{t-1} + \gamma \cdot (y_{t-1} - kx_{t-1}) + \epsilon_t$$

浣拌 緇撒灘琛■?? 鎵紺

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1      \begin{table}[ht]
2      \centering
3      \caption{璇 樊淇 妯" 瀾浣拌 緇撒灘{}}
4      \label{tab:coin-correction-model}
5      \begin{tabular}{l | rrrr} \hline \hline
6          Coefficients: & Estimate & Std. Error & t value & Pr(>|t|) & \\
7          \hline
8          (Intercept)   & 22.13335 & 11.14436 & 1.986 & 0.0573 & \\
9          L($\Delta y$, 1) & -0.46108 & 0.19994 & -2.306 & 0.029* & \\
10         L($\Delta y$, 2) & -0.01601 & 0.12908 & -0.124 & 0.9022 & \\
11         L($\Delta y$, 3) & -0.03563 & 0.12999 & -0.274 & 0.7861 & \\
12         L($\Delta y$, 4) & -0.02875 & 0.13862 & -0.207 & 0.8373 & \\
13         L($\Delta x$, 1) & 0.05842 & 0.02549 & 2.292 & 0.03* & \\
14         L($\Delta x$, 0) & 0.09517 & 0.01852 & 5.138 & 0.000021*** & \\
15         L(r, 1)       & -0.38373 & 0.16855 & -2.277 & 0.0309* & \\
16         \hline \hline
17     \end{tabular}
18 \end{table}

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璇 樊淇 楞圭琬緋绘暄鏇0%鑽勳▼ 拑 榱鏷鎵忔岯錫戰嘶涓(1, -0.15)



(a) 壁劬駭鏢伴嘸

fig:3-0-2

(b)  
壁  
劬  
駭  
禮  
為  
曜  
鏢

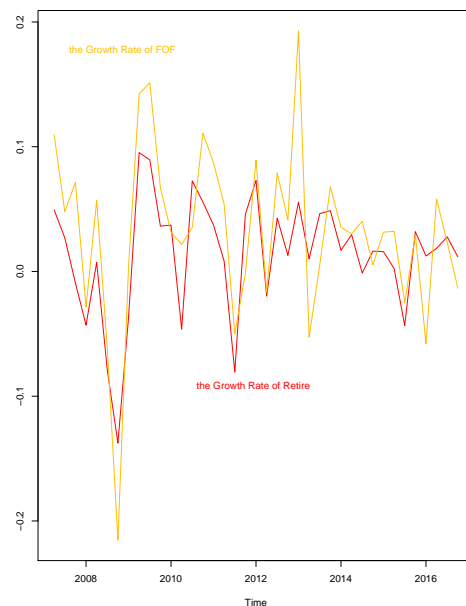


图 1: 2007-2016 年 OF 退休人数和 10 岁及以上人口数量的变化