

# Consumption

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#### Discussant: Andrei S. Gonçalves

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#### Outline

#### The Paper

My Comments

**Final Remarks** 

• Typical CCAPMs:

• The Paper's Logic:

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  - $\circ ~ \mathbb{E}_t[\Delta c]$  is constant (e.g., Campbell and Cochrane (1999))
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  - $\circ \ \mathbb{E}_t[\Delta c]$  is hard to identify from  $\Delta c_t$  data (dark matter)
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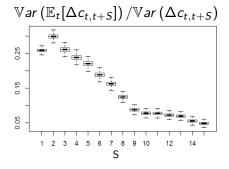
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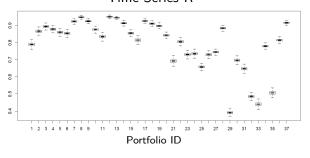
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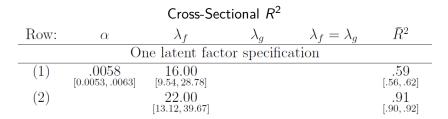
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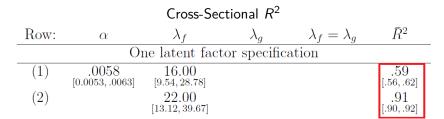
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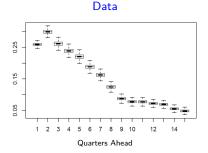
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- But wrong mechanism: what matters is short-run  $\mathbb{E}_t[\Delta c]$

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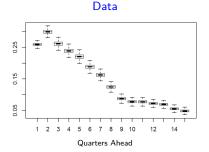


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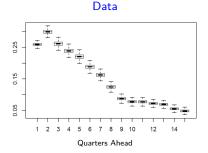


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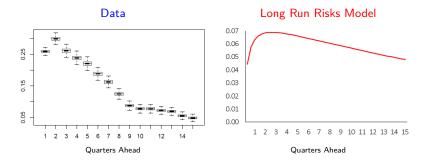


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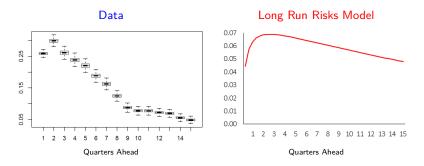


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$$\frac{\mathbb{V}ar\left(\mathbb{E}_t[\Delta c_{t,t+15}]\right)}{\mathbb{V}ar\left(\Delta c_{t,t+15}\right)} = 5\% \text{ vs } 5\%$$

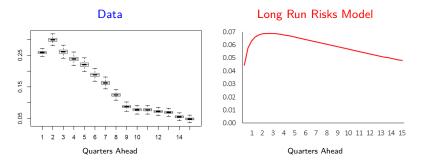


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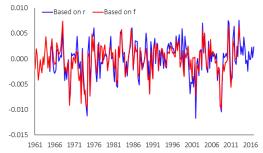
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 for  $Cov\left(\mathbf{r}_{t}^{e},b\right)$ 

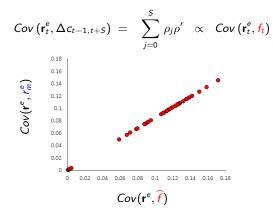
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$$Cov\left(\mathbf{r}_{t}^{e},\Delta c_{t-1,t+S}\right) = \sum_{j=0}^{S} \rho_{j}\rho' \propto Cov\left(\mathbf{r}_{t}^{e},\mathbf{f}_{t}\right)$$

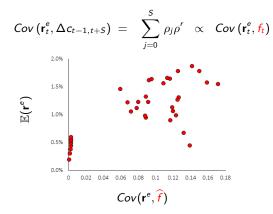
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#### Other Comments

1. Do other variables predict  $\Delta c_t$  controlling for  $f_t$  history?

- 2. Could estimate preference parameters
- 3. Is it possible to disentangle  $\Delta c_t$  predictability from  $\Delta c_t$  filtering? (Kroencke 2017, JF)
- 4.  $\Delta c_t$  predictable, but  $f_t$  independent?
  - $\circ~$  If  $\mathbb{E}[\Delta c]$  varies over time then  $\mathbb{E}[\mathbf{r}^e]$  likely also does
  - This issue affects  $Cov(\mathbf{r}_t^e, \Delta c_{t-1,t+S})$

#### Outline

#### The Paper

My Comments

- Interesting paper with novel perspective on  $\Delta c$  predictability:
  - $\circ$  Households react to shocks by adjusting both  $c_t$  and  $arpi_t$
  - $\circ$  Holding supply fixed, adjustments in  $arpi_t$  lead to price changes
  - We can use the  $r_t$  history to identify  $\mathbb{E}_t[\Delta c]$
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  - Show that  $\mathbb{E}_t[\Delta c]$  is not that persistent (although volatile)
  - Justify why the latent  $f_t$  structure is preferred over  $f_t = r_{m,t}^e$
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Long Run Risks Model  $\mathbb{V}ar\left(\mathbb{E}_t[\Delta c_{t,t+S}]\right)/\mathbb{V}ar\left(\Delta c_{t,t+S}\right)$ 

• 
$$\mathbb{E}_t[\Delta c_{t,t+S}] = S \cdot \mu + (1 + \rho + \rho^2 + ... + \rho^{S-1}) \cdot x_t$$

• 
$$\mathbb{V}ar\left(\mathbb{E}_{t}[\Delta c_{t,t+S}]\right) = (1 + \rho + \rho^{2} + ... + \rho^{S-1})^{2} \cdot \frac{\phi_{e}^{2} \cdot \sigma^{2}}{1 - \rho^{2}}$$

• 
$$\mathbb{V}$$
ar  $(\Delta c_{t,t+1} - \mathbb{E}_t[\Delta c_{t,t+1}]) = \sigma^2$ 

• 
$$\mathbb{V}ar\left(\Delta c_{t,t+S} - \mathbb{E}_t[\Delta c_{t,t+S}]\right) = \sigma^2 \cdot S + \phi_e^2 \cdot \sigma^2 \cdot [1 + (1 + \rho) + (1 + \rho + \rho^2) + ... + (1 + \rho + \rho^2 + ... + \rho^{S-2})]$$

•  $\mathbb{V}ar(\Delta c_{t,t+S}) = \mathbb{V}ar(\mathbb{E}_t[\Delta c_{t,t+S}]) + \mathbb{V}ar(\Delta c_{t,t+S} - \mathbb{E}_t[\Delta c_{t,t+S}])$