



# **Nowcasting Firm-level Earnings Using Macro Data**

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- Nowcasting: particularly relevant for low frequency, business cycle-related variables announced with substantial lag, i.e, accounting earnings
- At least two reasons:
  - Firm-level earnings nowcasts incorporate very timely information
  - Firm-level earnings nowcasts incorporate contextual macroeconomic information
    - => These two features reduce analysts' timing and information advantages
    - => Very much like analysts, a nowcasting model for firm-level earnings reads and interprets the macroeconomic news-flow to update earnings expectations in real-time
- $NOWCAST_{i,t} = \beta_{i,t} MACRONOWCAST_t$

# Empirical Evidence: Carabias (2018)



- Firm-level earnings nowcasts strongly anticipate forthcoming earnings releases ( $R^2$  from Fama-MacBeth regressions in the range of 4% – 12%)
- The information in firm-level earnings nowcasts is not subsumed by the information in analyst forecasts or lagged earnings
  - Earnings nowcasts dominate lagged earnings in predictive regressions
  - The predictive power of earnings nowcasts and analyst forecast splits almost equally in predictive regressions
- Stock prices behave as if investors systematically underreact to the macroeconomic news-flow
  - Earnings announcements returns are predictable based on firm-level nowcasts
  - Long-short portfolios that exploit the information content of nowcasts yield significant 5-factor alphas

# Suggestions for Future Research:



1. Focus on  $\beta_{i,t}$
2. Incorporate high frequency firm-level news
3. Model the unobserved common factor in earnings rather than the unobserved common factor in macroeconomic series

# 1. Focus on $\beta_{i,t}$

- In Carabias (2018)  $\beta_{i,t}$  is modelled as an unobserved variable
  - $\beta_{i,t}$  is likely to be affected among other things by:
    - Firms' investment policies
    - Firms' financing policies
    - Firms' portfolio of contracts with suppliers and customers
- => Are the above features picked-up by observable firm characteristics that we could exploit?
- "Fundamental beta" research seems a good starting point. Good recent examples are Ellahie (2016) or Li, Richardson and Tuna (2015)
- => Challenge is how to incorporate these observable characteristics to obtain good out-of-sample predictive performance

## 2. Incorporate High Frequency Firm-level News



- Carabias (2018):  $NOWCAST_{i,t} = \beta_{i,t} MACRONOWCAST_t$
- Besides the limited amount of information these earnings nowcasts exploit:
  - Both analyst forecasts and nowcasts are significant in predictive regressions
- ⇒ These suggest that nowcasts incorporate macroeconomic information more efficiently
- $NOWCAST_{i,t} = \beta_{i,t} MACRONOWCAST_t + NEWS_{i,t}$  could bring significant improvements

⇒ Challenge is the non-structured arrival of firm-level news

⇒ Matthew's presentation provides very interesting ideas on unconventional data that could be used

### 3. Unobserved Common Factor in Earnings



- $MACRONOWCAST_t$  is obtained from  $MACRO_{k,t} = \beta_k F_t + e_{k,t}$
- Nowcasting models should be targeted to the ultimate variable of interest:
  - Model earnings as:  $EARNINGS_{i,t} = \beta_i F'_t + e'_{i,t}$ 
    - $\Rightarrow F_t \neq F'_t ?$
  - Obtain the nowcast directly as:  $NOWCAST_{i,t} = \beta_i F'_t$ 
    - $\Rightarrow$  Challenge is the clustering of information around earnings announcements
    - $\Rightarrow$  Advantage is to exploit cross-firm predictability and asynchronous announcements
  - A good starting point to think about these models is Patton and Verardo (2012)

