**Main RQ**

Is narrative disclosure more responsive to bad news than good news?

**Concept**

- Content
  - Quantity
  - Consistency
- in terms of
- Timeliness

**Measure**

- NW: Total number of words in the document
- TONE: Tone of the document
- TLAG: Time lag between the news release date and document filing date
- TLAG of 8-K is more convincing than 10-Q

**Model**

**$Doc\_measure_t = b_0 + b_1*RET_t + b_2*NEG_t + b_3*RET_t*NEG_t + controls_t$**, where doc_measure = NW, TONE, TLAG_OP

- If narrative disclosure is more responsive to bad news than good news, then I expect:
  - **NW: $b_3$ should be positive**
    - bad news reporting requires more careful explanation than good news which translate into longer document
  - **TONE: $b_1$, $b_1+b_3$ and $b_3$ should be positive**
    - positive $b_1$ and $b_1+b_3$ means that tone is consistent with news: good news – positive tone, bad news – negative tone
    - positive $b_3$ means that firms increase consistency in narrative disclosure in response to bad news comparing to good news; i.e. more negative tone is used to discuss bad news than positive tone is used to discuss good news on average, given the same magnitude of news impact
  - **TLAG_OP: $b_3$ should be positive**
    - bad news reporting is more timely than good news which translate into shorter lag

**Additional RQ**

Factors affecting the asymmetric responsiveness to good v.s. bad news in narrative disclosure?

- **Policy:** textual disclosure related to items that mainly apply conditional (PP&E) v.s. unconditional (R&D) conservative accounting policy in its numerical disclosure
- **Purpose:** text disclosure that aims to explain numerical disclosure (notes) v.s. to provide forward-looking information (MD&A)

**Model – only 10Q**

**$Doc\_measure = a_0 + b_1*RET + b_2*NEG + b_3*RET*NEG + c_1*SEC + c_2*RET*SEC + c_3*NEG*SEC + c_4*RET*NEG*SEC + controls$**, where SEC is:

- **Policy indicator** that takes 1 if the textual section is related to items that mainly apply unconditionally conservative in its numerical disclosure (R&D), and 0 if related to items that mainly apply conditionally conservative in its numerical disclosure (PP&E)
- **Purpose indicator** that takes 1 if the textual section is explanatory (notes), and 0 if is forward-looking (MD&A)

**Robustness**

- Other news proxy: tariff / oil price (case study for specific industries)
- ABTONE – Huang et al. 2014

# CRSP_COMP_10-Q Process

## CRSP

- Total number of monthly obs. in CRSP: 4,606,907
- Number of monthly obs. in CRSP that contains *numeric* returns: 4,511,394

## COMPUSTAT

- Total number of quarterly obs. (10-Q + 10-K) in Compustat: 1,142,966
- Number of quarterly obs. in Compustat with 9-digits cusips: 1,142,561

## EDGAR

- Total number of 10-Qs in Edgar: 594,017
- Number of 10-Qs successfully parsed and downloaded: 575,579

Merge and aggregate CRSP monthly returns to quarterly returns

## CRSP_COMP

- Number of cusip-quarter observations after merging and dropping obs. with missing gvkey and return: 740,697

Merge

## CRSP_COMP_EDGAR_10-Q

- Number of cik-quarter observations after
  - merging: 303,034
  - dropping obs. according to a set of data screening criterion*: 190,341

Raw Data Time Period

- Edgar: 1993 Jan. – 2020 Mar.
- Compustat: 1991 Jan. – 2020 Apr.
- CRSP monthly: 1925 Dec. - 2019 Dec.

**TABLE 1:** Summary statistics

**TABLE 2:** $Doc\_measure_t = b_0 + b_1*RET_t + b_2*NEG_t + b_3*RET_t*NEG_t + controls_t$

* For example, dropping non-positive total asset and book equity, 10-Q words less than 1% quantile etc., see code.

# Abnormal Tone_10-Q Process

## CRSP_COMP_EDGAR_10-Q

- Number of cik-quarter observations 190,341

## I/B/E/S

- Total number of cusip-fpedats-analyst: 9,812,071
- Number of cusip-fpedats, after dropping missing cusip and actual: 155,539

## COMPUSTAT SEGMENT

- Total number of gvkey-datadate-sid: 452,653
- Number of gvkey-datadate: 50,876

Merge and assign IBES annual forecast variables to quarterly filings

## CRSP_COMP_EDGAR_IBES

- Number of cusip-quarter observations after merging: 110,095

Merge (number of segment set to 1 if missing)

## CRSP_COMP_EDGAR_IBES_SEG

- Number of gvkey-quarter obs. after merging: 110,114
- Number of gvkey-quarter obs. after screening missing data: 91,606

**TABLE 4:** Construct ABTONE; Equation (3)

$$TONE_{jt} = \alpha + \beta_0 EARN_{jt} + \beta_1 RET_{jt} + \beta_2 SIZE_{jt} + \beta_3 BTM_{jt} + \beta_4 STD\_RET_{jt} + \beta_5 STD\_EARN_{jt} + \beta_6 AGE_{jt} + \beta_7 BUSSEG_{jt} + \beta_8 GEOSEG_{jt} + \beta_9 LOSS_{jt} + \beta_{10} \Delta EARN_{jt} + \beta_{11} AFE_{jt} + \beta_{12} AF_{jt} + \varepsilon_{jt}, \quad (3)$$

## CRSP_COMP_EDGAR_IBES_SEG

- Number of gvkey-quarter obs. after adding DA and screening missing data: 53,218

**TABLE 3:** summary statistics, with all variables necessary to construct ABTONE and replicate

**TABLE 6**: Huang et al., 2014 main results replication; Equation (4) and (5)

$$EARN_{jt+n} = \alpha + \beta_0 ABTONE_{jt} + \beta_1 DA_{jt} + \beta_2 EARN_{jt} + \beta_3 SIZE_{jt} + \beta_4 BTM_{jt} + \beta_5 RET_{jt} + \beta_6 STD\_RET_{jt} + \beta_7 STD\_EARN_{jt} + \varepsilon_{jt}, \quad (4)$$

where $n = (1, 2, \text{or } 3)$,

$$CFO_{jt+n} = \alpha + \beta_0 ABTONE_{jt} + \beta_1 DA_{jt} + \beta_2 EARN_{jt} + \beta_3 SIZE_{jt} + \beta_4 BTM_{jt} + \beta_5 RET_{jt} + \beta_6 STD\_RET_{jt} + \beta_7 STD\_EARN_{jt} + \varepsilon_{jt}, \quad (5)$$

where $n = (1, 2, \text{or } 3)$.

**TABLE 5:** Integrate ABTONE into my study

$$ABTONE_t = b_0 + b_1 * RET_t + b_2 * NEG_t + b_3 * RET_t * NEG_t + controls_t$$

Raw Data Time Period

- IBES: 1981 Dec. – 2019 Jul.
- CRSP_COMPUSTAT_EDGAR: 1993 Jan. – 2019 Dec.
- Compustat Segment: 2011 Jun. – 2020 Jan.

# CRSP_COMP_8-K Merging Process (WIP!!!)

## CRSP

- Total number of daily obs. in CRSP: 51,027,516
- Number of daily obs. in CRSP that contains *numeric* returns: 50,284,832

## COMPUSTAT

- Total number of quarterly obs. (10-Q + 10-K) in Compustat: 1,142,966
- Number of quarterly obs. in Compustat with 9-digits cusips and unique cusip-datadate: 1,140,302

Merge and assign COMP quarterly financial data to all calendar days within that quarter

## CRSP_COMPUSTAT

- Number of cik-day observations after merging and dropping obs. with missing cik: 40,510,031

## EDGAR

- Total number of 8-Ks in Edgar: 1,628,467
- Number of 8-Ks successfully parsed and downloaded: 1,578,861
- Number of cik-days after screening*: 1,541,027

Merge

## CRSP_COMPUSTAT_EDGAR_8-K

- Number of cik-quarter observations after merging: ?

Raw Data Time Period

- Edgar: 1993 Jan. – 2020 Mar.
- Compustat: 1991 Jan. – 2020 Apr.
- CRSP daily: 1992 Nov. - 2019 Dec.

* see code for screening criterion.