

Main Street's Pain, Wall Street's Gain

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Motivation

Conventional wisdom:

- ▶ **Bad** (good) macro news should drive **down** (up) stock prices.

But during Covid-19 (Feb 2020-Mar 2021):

- ▶ **1 SD** ↑ in jobless claims surprises (8.7%) leads to ↑ daily stock returns **of 30 bps**

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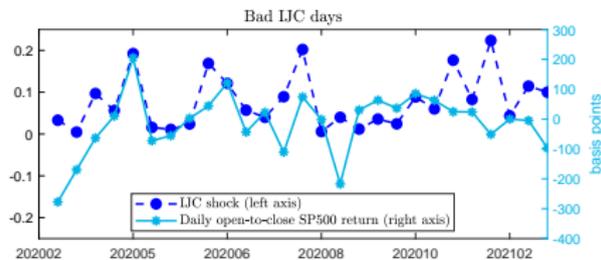
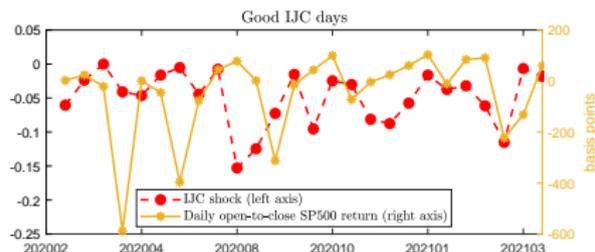
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Boyd, Hu, and Jagannathan (2005); Law, Song, and Yaron (2020):

- ▶ Bad labor news could be good news for stocks if a lower interest rate is expected
 - However, most of 2020-2021 at the zero lower bound;
 - Most UMP announced before April/2020 timeline

We propose: Fiscal Policy (FP) Expectation

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- ▶ **{Part 1 - Aggregate}** FP expectations should explain return responses to IJC shocks;
- ▶ **{Part 2 - Cross Section}** Firms/industries that are expected to receive more fiscal support should exhibit higher individual stock return responses when bad IJC news arrives.

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- ▶ **{Part 2 - Cross Section}** Firms/industries that are expected to receive more fiscal support should exhibit higher individual stock return responses when bad IJC news arrives.
- ▶ **{Part 3 - External validation + Conceptual framework}** Monthly macro variables; Bansal & Yaron (2004) & a simple fiscal rule (entering expected growth)

Textual analysis: What do people discuss on IJC days

- ▶ **Challenge: Scant literature on measuring real-time fiscal policy expectation**
 - ⇒ Formally capture what topics are being discussed when IJC news comes out
 - ⇒ Use these topic mentioning scores as mechanism variables

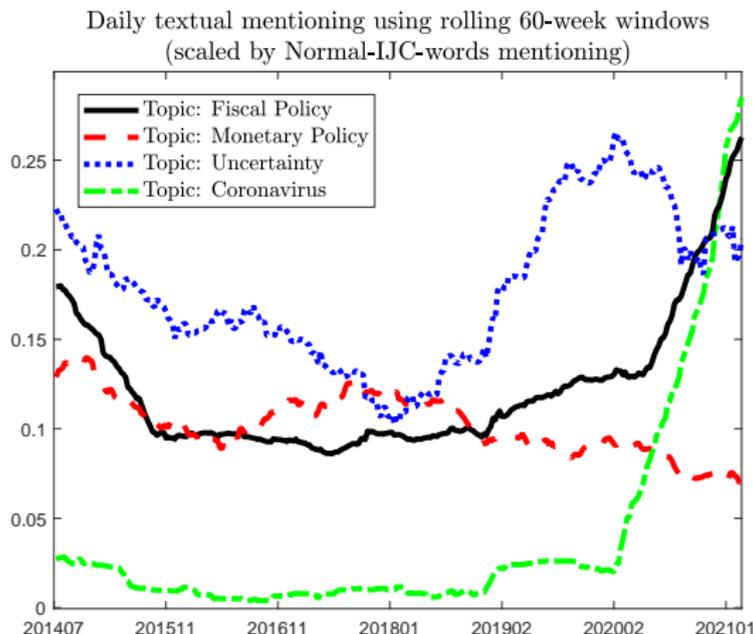
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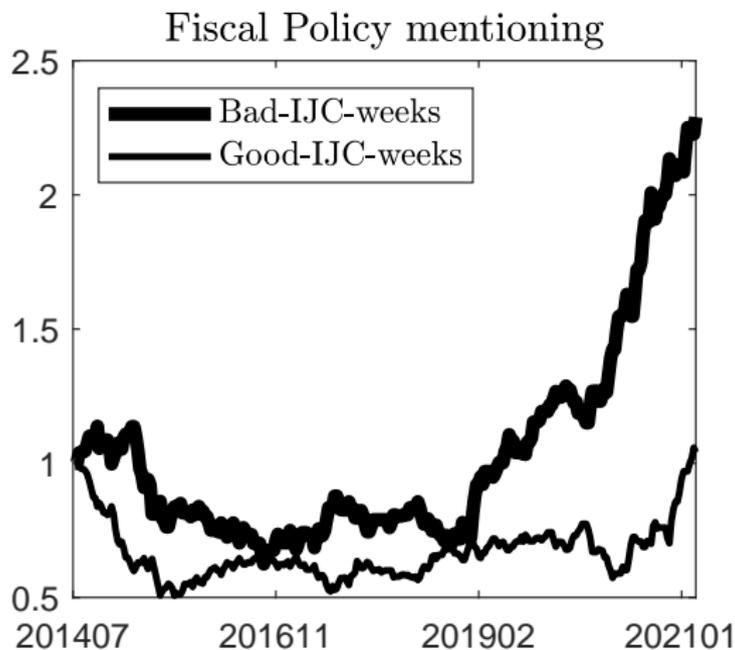
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Fiscal policy mentions appear more on bad IJC days



[Example, 2/18/2021] “*The weekly unemployment claims report from the Labor Department on Thursday... could **add impetus** to President Joe Biden’s push for a \$1.9 trillion package...*”

Example (8/20/2020)

Example (12/17/2020)

Main results - Aggregate

- ▶ **Sample:** January 2013 - March 2021

LHS: Time-varying coeff. of S&P500 returns on IJC shock		
	All IJC days	Bad IJC days
FP (standardized)	197.735***	262.104***
MP (standardized)	110.275***	87.471
R2 Ordinary	63.9%	57.5%
R2 Adjusted	63.6%	56.8%
N	271	116

- When **fiscal policy mentioning** is **higher** than its average, stock returns significantly **increases more** when a bad IJC shock arrives.
- The effect is **stronger in the bad IJC subsample**.
- **Notes and robustness:** replicate BHJ2005 and LSY2020 results only during good IJC days (✓); non-overlapping interaction framework (✓); controlling for volatility (✓), text-based MP mentions (✓), survey-based $\Delta Tbill3M$ expectation (✓); various major stock market indices (✓); subsample (✓); monthly macro announcements (“main street” category ✓)

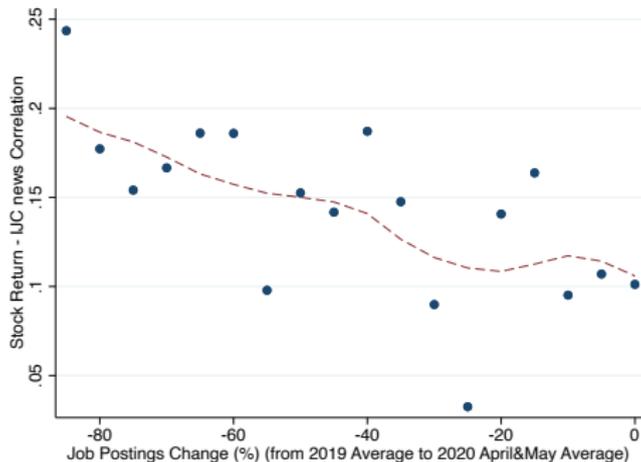
Main results - Cross Section

- ▶ **Finding:** Firms/industries that *are expected to receive more fiscal support* during covid exhibit a *stronger* “Main Street pain, Wall Street gain” phenomenon.
 - **Period:** April 2020-March 2021
 - **Three cross-sections:**
 - CS1-expected to suffer more during covid
 - CS2-mentioned more in the stimulus bills
 - CS3-higher obligated funding amounts from the government

Main results - Cross Section

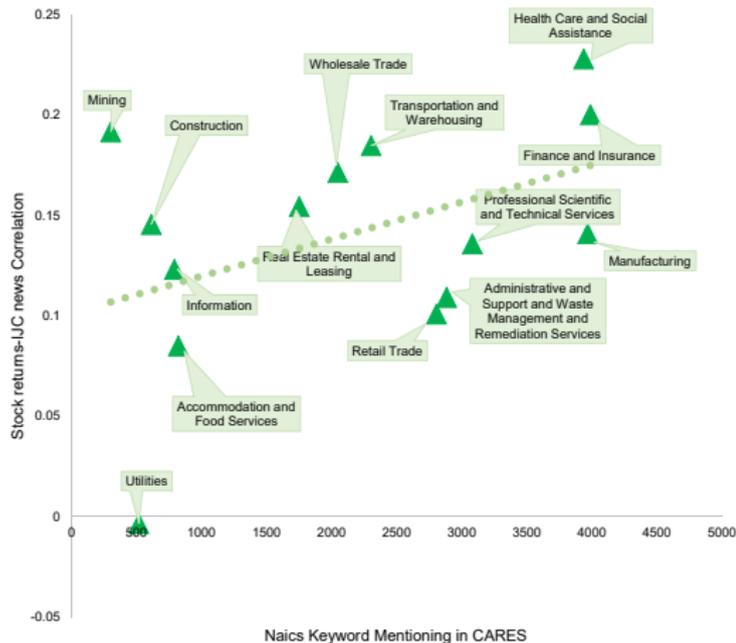
► CS 1: Firms with more expected losses

- **All-internet Job Postings: 2019-2020 April/May [forward-looking; 491 out of S&P500]**
(each dot=5% firms; 20 dots) industries



Main results - Cross Section

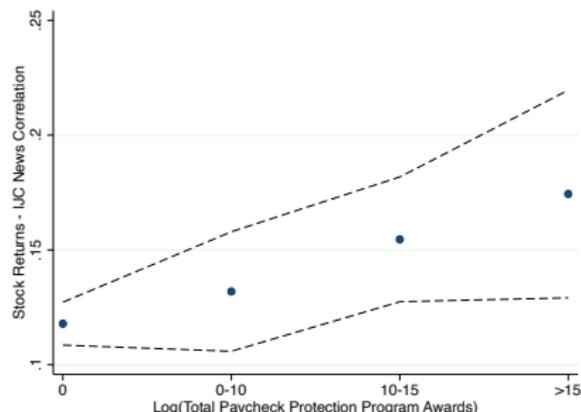
- ▶ CS 1: Firms with more expected losses
- ▶ CS 2: Industries that get mentioned more in legal bills



Main results - Cross Section

- ▶ **CS 1: Firms with more expected losses**
- ▶ **CS 2: Industries that get mentioned more in bills**
- ▶ **CS 3: Firms with higher obligated funding amounts** (covid-relief awards)

$$Corr_i = \beta_0 + \underset{0.287***}{\beta_1} \log(1 + Covid_Funding_i) + \epsilon_i$$



Contributions

1. {where it all started...} **Our motivation example.** The Covid crisis (2020-2021) triggered an unprecedented adverse shock to the labor market, the “main street”, which helps unveil this new mechanism;
 - Providing more evidence to the “Big Disconnect” discussion using daily data
2. {mechanism, and its measurement} **New fiscal policy expectation mechanism**, while the literature focuses on the monetary policy expectation channel, and debates regarding long-term effects of fiscal policy in equilibrium models;
 - *MP expectation and asset prices*: Law, Song, and Yaron (2020), Yang and Zhu (2021), Caballero and Simsek (2021); *FP & low-frequency long-term effects*: Agnello, Castro, and Sousa (2012), Agnello and Sousa (2013), Gomes, Michaelides, and Polkovnichenko (2013), Jiang, Lustig, Van Nieuwerburgh, and Xiaolan (2021)
3. {return dynamics} **Increasing importance of fiscal policy explaining positive stock market jumps**
 - Baker, Bloom, Davis, and Sammon (2021), Greenwood, Laarits, and Wurgler (2022)
4. {research about covid } **Broader context.** voluminous literature
 - Goldstein, Koijen, and Mueller (2021) comment (pp.5146), “Understanding the short- and long-run effectiveness of such fiscal policy interventions ... is an important question for future research.”

To conclude:

- ▶ New takeaways from this paper:
 - **Investors form fiscal policy expectations**
 - **One particular driver: Labor news ↓, fiscal stimulus expectation ↑**
 - **Firms that are expected to receive more fiscal support gain more**
 - **The pricing channel is through expected cash flow growth, in covid-context, a faster recovery**

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- ▶ Put our story in dollars:
 - 2000-2019: Bad (good) IJC days, daily market capital gain=2M\$ (8M\$)
 - 2020-2021: **Bad (good)** IJC days, daily market capital gain=**73M\$ (18M\$)**

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- ▶ Our future line of work:
 - **A post-covid discussion:** Stimulus checks are still being distributed as of 2022 → people form expectations of “government put” → feeds back to macro variables (e.g. inflation hikes, great resignation, upcoming recession)?
 - **A wealth-inequality discussion:** “Who gets what?” In the long run, who benefits from the fiscal spending — labor, or capital?

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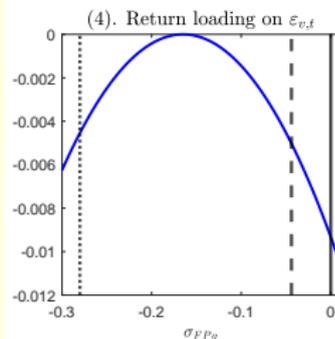
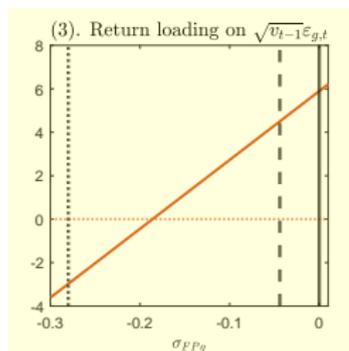
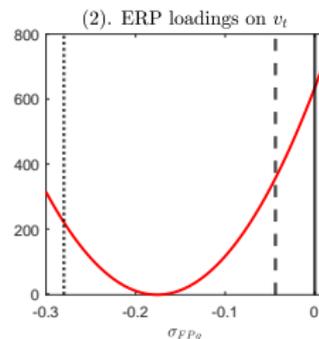
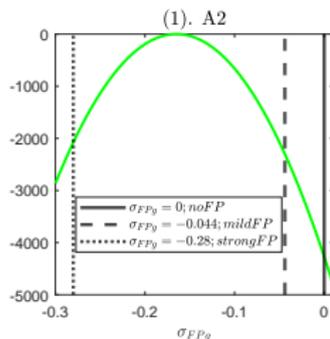
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Thank you!

Date	Federal Reserve Action Timeline
3/15/2020	The Fed Funds Rate cut to zero https://www.federalreserve.gov/newsevents/pressreleases/monetary20200315a.htm
3/15/2020	Quantitative easing (large scale asset purchases) https://www.federalreserve.gov/newsevents/pressreleases/monetary20200315a.htm
3/15/2020	Encourage use of the discount window https://www.federalreserve.gov/newsevents/pressreleases/bcreg20200316a.htm
3/15/2020	Flexibility in bank capital requirements https://www.federalreserve.gov/newsevents/pressreleases/monetary20200315b.htm
3/15/2020	Coordinated international action to lower pricing on US dollar liquidity swap arrangements https://www.federalreserve.gov/newsevents/pressreleases/monetary20200315c.htm
3/17/2020	Creation of a commercial paper funding facility (CPFF) https://www.federalreserve.gov/newsevents/pressreleases/monetary20200317a.htm
3/17/2020	Creation of a primary dealer credit facility (PDCF) https://www.federalreserve.gov/newsevents/pressreleases/monetary20200317b.htm
3/18/2020	Creation of a money market mutual fund liquidity facility (MMLF) https://www.federalreserve.gov/newsevents/pressreleases/monetary20200318a.htm
3/19/2020	US dollar liquidity swap arrangements extended to more international central banks https://www.federalreserve.gov/newsevents/pressreleases/monetary20200319b.htm
3/20/2020	Frequency of US dollar liquidity swap operations updated to daily https://www.federalreserve.gov/newsevents/pressreleases/monetary20200320a.htm
3/20/2020	MMLF will now accept municipal debt https://www.federalreserve.gov/newsevents/pressreleases/monetary20200320b.htm
3/23/2020	Fed announces extensive new measures to support the economy <ul style="list-style-type: none"> 1. Expands its quantitative easing program 2. Establishes three new emergency lending facilities: PMCCF, SMCCF, TALF 3. Expands two existing programs: CPFF, PDCF https://www.federalreserve.gov/newsevents/pressreleases/monetary20200323b.htm
3/23/2020	Technical changes to total loss absorbing capacity (TLAC) https://www.federalreserve.gov/newsevents/pressreleases/bcreg20200323a.htm
3/24/2020	Fed delays implementation of foreign banking organization maximum daily overdraft rule https://www.federalreserve.gov/newsevents/pressreleases/other20200324a.htm
3/24/2020	Fed scales back non-critical oversight https://www.federalreserve.gov/newsevents/pressreleases/bcreg20200324a.htm
3/26/2020	Fed provides reporting relief for small principal institutions https://www.federalreserve.gov/newsevents/pressreleases/bcreg20200326b.htm
3/26/2020	New York Fed To Buy Commercial Mortgage-Backed Securities https://www.newyorkfed.org/markets/opolicy/operating_policy_00326
3/31/2020	Fed Establishes New Temporary Repo Facility https://www.federalreserve.gov/newsevents/pressreleases/monetary20200331a.htm
4/1/2020	Fed loosens bank capital requirements https://www.federalreserve.gov/newsevents/pressreleases/bcreg20200401a.htm
4/6/2020	Fiscal Fed implements CARES Act community bank capital ratio https://www.federalreserve.gov/newsevents/pressreleases/bcreg20200406a.htm

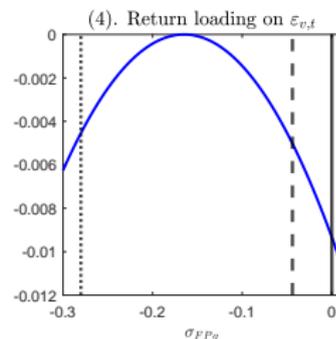
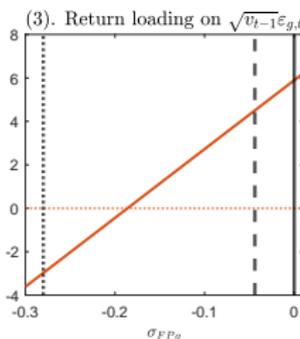
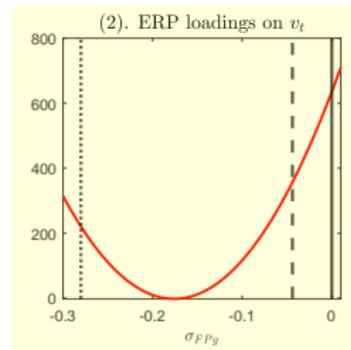
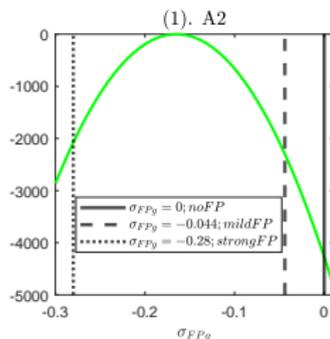
Date		Federal Reserve Action Timeline
4/9/2020	Fiscal	Fed announces three new emergency lending facilities designed to implement the relief provided by the CARES Act, support the work of Treasury and the Small Business Administration (SBA): 1. Paycheck Protection Program liquidity facility (PPPFL) 2. Main Street Business Lending Program 3. Municipal Liquidity Facility https://www.federalreserve.gov/newsevents/pressreleases/monetary20200409a.htm
4/23/2020	Fiscal	Fed Commits to Transparent Disclosure of Companies Receiving Financial Aid through the liquidity and lending facilities using Coronavirus Aid, Relief, and Economic Security, or CARES, Act funding https://www.federalreserve.gov/newsevents/pressreleases/monetary20200423a.htm
4/23/2020	Fiscal	Fed to expand access to PPPLF Program https://www.federalreserve.gov/newsevents/pressreleases/monetary20200423b.htm
4/27/2020	Fiscal	Fed expands access to municipal lending facility https://www.federalreserve.gov/newsevents/pressreleases/monetary20200427a.htm
4/30/2020	Fiscal	Fed expands Main Street Lending Program https://www.federalreserve.gov/newsevents/pressreleases/monetary20200430a.htm
5/11/2020	Fiscal	Fed releases term sheet for municipal liquidity facility clarifying pricing https://www.federalreserve.gov/newsevents/pressreleases/monetary20200511a.htm
5/15/2020	Fiscal	Fed provides first report to congress on PPPLF facility https://www.federalreserve.gov/monetarypolicy/ppplf.htm
5/15/2020		Fed loosens bank capital requirement (again) https://www.federalreserve.gov/newsevents/pressreleases/bcreg20200515a.htm
5/19/2020	Fiscal	Main Street Business Lending Program and Municipal Liquidity Facility Programs to commence end of may https://www.federalreserve.gov/newsevents/testimony/powell20200519a.htm
6/3/2020	Fiscal	Municipal Liquidity Facility opens and access once again expanded https://www.federalreserve.gov/newsevents/pressreleases/monetary20200603a.htm
6/8/2020	Fiscal	Fed significantly expands access to proposed Main Street Lending Facility https://www.federalreserve.gov/newsevents/pressreleases/monetary20200608a.htm
6/15/2020	Fiscal	Main Street Lending Facility opens for lender registration https://www.bostonfed.org/news-and-events/press-releases/2020/..../federal-reserves-main-street-lending-program-opens-for-lender-registration.aspx?source=email
6/15/2020		Fed expands SMCCF, begins buying debt directly from large corporations https://www.newyorkfed.org/newsevents/news/markets/2020/20200615?source=email
6/15/2020	Fiscal	Fed requests feedback on extending Main Street Lending Program to Nonprofits https://www.federalreserve.gov/newsevents/pressreleases/monetary20200615b.htm
7/17/2020	Fiscal	Fed begins purchasing loans through Main Street Lending Program; opens program to non-profits https://www.federalreserve.gov/newsevents/pressreleases/monetary20200717a.htm
10/30/2020	Fiscal	Fed lowers main street lending program minimum loan amount to \$100,000 https://www.federalreserve.gov/newsevents/pressreleases/monetary20201030a.htm
11/3/2021		Fed announces that it will reduce pace of asset purchases https://www.federalreserve.gov/newsevents/pressreleases/monetary20201030a.htm

Calibration - Implication 1



- When a bad macro shock arrives, expected fiscal spending growth \uparrow , counteracting the decreases in expected cash flow growth (see left lower region). [back](#)

Calibration - Implication 2



- When a bad macro shock arrives, expected fiscal spending growth \uparrow , causing non-linear responses in volatility risk compensations. [back](#)

Appendix: Who appear more in high-suffering groups?

Numbers below: Likelihood ratio (15% most damaged firms relative to 50% least damaged firms)

NAICS Code	NAICS Industry Name	Employment Rank	Job Post-ing Change	Revenue Rank	EPS Rank
21	Mining	25.53	19.09	18.53	8.41
48	Transportation and Warehousing	8.51	4.45	5.05	6.05
72	Accommodation and Food Services	3.99	2.12	4.49	6.72
42	Wholesale Trade	2.55	0	0.26	1.68
53	Real Estate Rental and Leasing	1.37	0.32	1.93	0.37
22	Utilities	1.28	0	1.68	0.4
23	Construction	1.06	0	0	0
56	Administrative and Support and Waste Management and Remediation Services	1.06	1.06	1.35	0.48
31	Manufacturing	0.72	1.55	0.9	0.8
44	Retail Trade	0.64	0.37	0.79	0.72
51	Information	0.61	0.24	0	0.15
52	Finance and Insurance	0.41	0	0.66	1.26
54	Professional Scientific and Technical Services	0.32	0.19	0	0.28
62	Health Care and Social Assistance	0	0	0	0.67

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- ▶ Most papers focus on the **immediate effects on capital markets** (Gormsen and Koijen (2020), Landier and Thesmar (2020), Baker, Bloom, Davis, and Terry (2020a)), **households** (Baker, Farrokhnia, Meyer, Pagel, and Yannelis (2020b), Pastor and Vorsatz (2020), Levine, Lin, Tai, and Xie (2021)), **economy** (Eichenbaum, Rebelo, and Trabandt (2021), Fahlenbrach, Rageth, and Stulz (2021)), **labor market** (Papanikolaou and Schmidt (forthcoming), Bartik, Bertrand, Lin, Rothstein, and Unrath (2020)), **banks** (Li, Li, Macchiavelli, and Zhou (2021)), and **policy responses** (Darmouni and Siani (2021), Gourinchas, Kalemli-Ozcan, Penciakova, and Sander (2021))

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Textual analysis: What do people talk about on IJC days?

- ▶ **Empirical challenge: No literature on measuring fiscal policy expectations**
 - ▶ Textual analysis:
 - ⇒ CNBC has a designated website for Initial Jobless Claims – consistent, reliable, timely source of IJC news on the announcement day (<https://www.cnbc.com/jobless-claims/>)
 - ⇒ Downside: not directly downloadable from business news data vendors – we scrape and manually verify all available CNBC IJC news articles on announcement days
 - ⇒ Construct topic mentioning scores – “Term Frequency-Inverse Document Frequency”
 - more about tfidf
 - FP example (8/20/2020)
 - FP example (12/17/2020)
 - FP example (02/18/2021)
1. Fiscal policy (FP) **Focus on words that may reflect discussions of government spending, grants to the states, transfers (augmented unemployment benefits): “congress” “lawmaker” “Federal government” “aid” “extend” “benefit” “program” “eligible” “fiscal policy” “white house”...**
 2. Monetary policy (MP) **“central bank” “inflation” “Federal Reserve”, “interest rate”, “yellen”, “bernanke”, “powell” ...**
 3. Economic uncertainty (UNC)
 4. Coronavirus-related (COVID)
 5. Normal IJC words (NORMAL) **“week”, “claim”, “thursday”, “jobless”...**

Appendix: FP discussion example

August 20, 2020: *Earlier this week, more than 100 **House Democrats** urged **House Speaker** Nancy Pelosi, D-Calif., to pass a smaller bill that would reinstated the **extra benefits**. **Republicans** have indicated they want to **extend** the **additional benefit** at a lower rate. “It’s been four weeks without the **\$600/week CARES Act benefits** for tens of millions of unemployed Americans,” said Zhao. “While a handful of states are approved to disburse the new **\$300/week benefits**, it remains unclear how quickly the **benefits** will be able to flow to unemployed Americans already facing an unsteady recovery.”*

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Appendix: FP discussion example

December 17, 2020: *The recent uptick in weekly jobless claims comes as coronavirus cases surge across the country. **Congress**, meanwhile, is scrambling to push through new **legislation** to **aid** individuals and businesses before year-end. **Congressional** leaders on Wednesday closed in on a **\$900 billion** package that would include direct **payments** to individuals.*

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Appendix: FP discussion example

February 18, 2021: *The total of those receiving **benefits** dropped by 1.3 million to 18.34 million, primarily due to a falloff in those on Covid-19 pandemic-related claims in the final week of January. However, those numbers have accelerated in early February... **Congress** is trying to negotiate a **\$1.9 trillion White House** stimulus plan. Part of that proposal includes **extended** jobless **benefits** that are scheduled to run out in mid-March... The number of Americans filing first-time applications for unemployment **benefits** unexpectedly rose last week... The weekly unemployment claims report from the Labor Department on Thursday, the most timely data on the economy's health, could add impetus to **President** Joe Biden's push for a **\$1.9 trillion package** to aid the recovery from the pandemic.*

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Appendix: TF-IDF Score

- ▶ In general, the score of a word (after stemming and lemmatization) increases proportionally to the number of times this word appears in the document (Luhn (1957)), and is offset by the number of documents in which it occurs, to adjust for the fact that some words appear more frequently in general (Jones (1972)). TF-IDF has become the state-of-the-art and popular term-weighting method, as Beel, Gipp, Langer, and Breitingner (2016)'s recent survey documents that, in the information retrieving literature, 83% of text-based recommender systems in digital libraries use TFIDF.
- ▶ The average of TF-IDF scores of all words in the same topic then becomes the topic's score.

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