Codebook
Financial Sanction Spillovers and Firm Interdependence

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Lorenzo Crippa* Nikhil Kalyanpur† Abraham L. Newman‡

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*Corresponding author. University of Strathclyde. l.crippa@strath.ac.uk
†London School of Economics and Political Science. N.Kalyanpur@lse.ac.uk
‡Georgetown University. aln24@georgetown.edu

1 Codebook description

This document provides a description of all the data files contained in the replication package. We begin with the files in the `data_in` subfolder. Next, we present files in the `data_out` subfolder.

For each dataset, we describe in full the variables included. We present the variable name, introduce a description of the variable, and describe how the variable is coded. Users who intend to obtain information on a specific variable contained in a dataset should consult the section of the codebook that pertain to that dataset.

For any query about the data or the codebook, please contact the data curator Lorenzo Crippa at the following email address: crippa.lnz@gmail.com.

2 Input data files

This section describes the data files that are inputs of several scripts, contained in the folder `data_in`.

2.1 Filename `data_in/data_estimation.rds`

This file contains daily stock market trading information for all Compustat firms and covariates. Stock market information comes from several sources (Compustat, CRSP, Yahoo! Finance, or Refinitiv, see variable `stock_source` for details).

2.1.1 Variables

Variable Name	`ticker_symbol`
Description	Ticker symbol for stock market trading
Coding	Character
Variable Name	`company_name`
Description	Company name
Coding	Character
Variable Name	`date`
Description	Date of observation
Coding	Date (YYYY-MM-DD)
Variable Name	`event`
Description	Date of Trump sanctions on WeChat and TikTok
Coding	Date (YYYY-MM-DD), unique value: August 7, 2020

Variable Name	`close`
Description	Price at closing of trading day, USD
Coding	Numeric
Variable Name	`chg`
Description	Daily stock returns. Percentage change in `close` price between consecutive trading days (`date`)
Coding	Numeric (percentage)
Variable Name	`shares`
Description	Number of outstanding shares (units)
Coding	Numeric
Variable Name	`stock_source`
Description	Source of stock market data for a given firm
Coding	Character (any of: "Yahoo! Finance" "COMPUSTAT", or "CRSP")
Variable Name	`sample`
Description	Distinguishes Tencent (direct target) from the rest of the firms (spillover effect)
Coding	Character (any of: "Tencent" or "Broader sample")
Variable Name	`chinese`
Description	Binary indicator for whether the firm is a US-traded Chinese company
Coding	Binary
Variable Name	`tencent_owned`
Description	Binary indicator for whether the firm is a Tencent-owned company
Coding	Binary
Variable Name	`wechat`
Description	Binary indicator for whether the firm is a WeChat-reliant company
Coding	Binary

Variable Name	`any_additional_event`
Description	Binary indicator for whether the firm was involved in any unrelated event in the time-period of Trump's sanctions
Coding	Binary

Variable Name	`A.N`, `AABA.OQJ19`, `AAL.OQ`, ..., `ZTS.N`
Description	Daily stock returns to the 455 individual S&P 500 constituents. Each variable name is the ticker symbol as reported by Refinitiv
Coding	Numeric (percentage)
Source	Refinitiv

Variable Name	`SP500`
Description	Daily stock returns to the market-wide S&P 500 index
Coding	Numeric (percentage)
Source	Yahoo! Finance

2.2 Filename `data_in/media_coverage.csv`

This file contains data on US media coverage of "WeChat," "Tencent," "TikTok," and "ByteDance" in conjunction with "sanctions" in the days before and after Trump's sanctions, All data in this file were retrieved from a Factiva search.

2.2.1 Variables

Variable Name	`date`
Description	Date of observation
Coding	Date (YYYY-MM-DD)
Variable Name	`tiktok_sanctions`
Description	Number of media mentions of "TikTok" and "sanctions"
Coding	Numeric
Variable Name	`bytedance_sanctions`
Description	Number of media mentions of "ByteDance" and "sanctions"
Coding	Numeric
Variable Name	`wechat_sanctions`
Description	Number of media mentions of "WeChat" and "sanctions"
Coding	Numeric
Variable Name	`tencent_sanctions`
Description	Number of media mentions of "Tencent" and "sanctions"
Coding	Numeric
Variable Name	`tiktok_or_bytedance_sanctions`
Description	Number of media mentions of "TikTok" or "ByteDance" and "sanctions"
Coding	Numeric
Variable Name	`wechat_or_tencent_sanctions`
Description	Number of media mentions of "WeChat" or "Tencent" and "sanctions"
Coding	Numeric

3 Output data files

This section describes the data files that are inputs of several scripts, contained in the folder `data_out`.

3.1 Filename `data_out/estimation_windows_stocks.rds`

This file contains an R list with 15 nested lists. Each list stores the results of the estimation windows with a given number of cross-validation folds and window length from `code/01_estimation_window.R`.

3.2 Filename `data_out/event_permut.rds`

This dataset is used in `code/06_appendix_D.R` to calculate the p-value of the Tencent effect with permutation inference. For variables with same name as in `data_in/data_estimation.rds`, see that codebook section.

3.2.1 Variables

Variable Name	`obs_chg`
Description	Daily observed stock returns. Percentage change in `close` price between consecutive trading days (`date`)
Coding	Numeric (percentage)
Variable Name	`fit_chg`
Description	Daily predicted stock returns. Fitted values from a 15-fold cross-validation LASSO market model with estimation window of size [-30; -3] days.
Coding	Numeric (percentage)
Variable Name	`abn_chg`
Description	Daily abnormal stock returns. Difference between `obs_chg` and `fit_chg`.
Coding	Numeric (percentage)
Variable Name	`fit_R2`
Description	R-squared of a 15-fold cross-validation LASSO market model with estimation window of size [-30; -3] days.
Coding	Numeric (percentage)
Variable Name	`car`
Description	Daily cumulative abnormal stock returns. Running sum of `abn_chg`.
Coding	Numeric (percentage)

3.3 Filename `data_out/event_stocks.rds`

This is the main dataset used for the analysis in the main text and appendix. For variables with same name as in `data_in/data_estimation.rds`, see that codebook section.

3.3.1 Variables

Variable Name	`d_event`
Description	Binary variable taking value of 1 on the day of Trump's sanctions, 0 otherwise
Coding	Binary
Variable Name	`post_event`
Description	Binary variable taking value of 1 on the day of Trump's sanctions or after, 0 otherwise
Coding	Binary
Variable Name	`obs_chg`
Description	Daily observed stock returns. Percentage change in `close` price between consecutive trading days (`date`)
Coding	Numeric (percentage)
Variable Name	`fit_chg`
Description	Daily predicted stock returns. Fitted values from a 15-fold cross-validation LASSO market model with estimation window of size [-30; -3] days.
Coding	Numeric (percentage)
Variable Name	`abn_chg`
Description	Daily abnormal stock returns. Difference between `obs_chg` and `fit_chg`.
Coding	Numeric (percentage)
Variable Name	`fit_R2`
Description	R-squared of a 15-fold cross-validation LASSO market model with estimation window of size [-30; -3] days.
Coding	Numeric (percentage)

Variable Name	`car`
Description	Daily cumulative abnormal stock returns. Running sum of `abn_chg`.
Coding	Numeric (percentage)
Variable Name	`fit_chg_90d15f`
Description	Daily predicted stock returns. Fitted values from a 15-fold cross-validation LASSO market model with estimation window of size [-90; -3] days.
Coding	Numeric (percentage)
Variable Name	`abn_chg_90d15f`
Description	Daily abnormal stock returns. Difference between `obs_chg` and `fit_chg_90d15f`.
Coding	Numeric (percentage)
Variable Name	`fit_R2_90d15f`
Description	R-squared of a 15-fold cross-validation LASSO market model with estimation window of size [-90; -3] days.
Coding	Numeric (percentage)
Variable Name	`car_90d15f`
Description	Daily cumulative abnormal stock returns. Running sum of `abn_chg_90d15f`.
Coding	Numeric (percentage)
Variable Name	`fit_chg_180d15f`
Description	Daily predicted stock returns. Fitted values from a 15-fold cross-validation LASSO market model with estimation window of size [-180; -3] days.
Coding	Numeric (percentage)
Variable Name	`abn_chg_180d15f`
Description	Daily abnormal stock returns. Difference between `obs_chg` and `fit_chg_180d15f`.
Coding	Numeric (percentage)

Variable Name	`fit_R2_180d15f`
Description	R-squared of a 15-fold cross-validation LASSO market model with estimation window of size [-180; -3] days.
Coding	Numeric (percentage)

Variable Name	`car_180d15f`
Description	Daily cumulative abnormal stock returns. Running sum of `abn_chg_180d15f`.
Coding	Numeric (percentage)

Variable Name	`fit_chg_30d10f`
Description	Daily predicted stock returns. Fitted values from a 10-fold cross-validation LASSO market model with estimation window of size [-30; -3] days.
Coding	Numeric (percentage)

Variable Name	`abn_chg_30d10f`
Description	Daily abnormal stock returns. Difference between `obs_chg` and `fit_chg_30d10f`.
Coding	Numeric (percentage)

Variable Name	`fit_R2_30d10f`
Description	R-squared of a 10-fold cross-validation LASSO market model with estimation window of size [-30; -3] days.
Coding	Numeric (percentage)

Variable Name	`car_30d10f`
Description	Daily cumulative abnormal stock returns. Running sum of `abn_chg_30d10f`.
Coding	Numeric (percentage)

Variable Name	`fit_chg_30d5f`
Description	Daily predicted stock returns. Fitted values from a 5-fold cross-validation LASSO market model with estimation window of size [-30; -3] days.
Coding	Numeric (percentage)

Variable Name	`abn_chg_30d5f`
Description	Daily abnormal stock returns. Difference between `obs_chg` and `fit_chg_30d5f`.
Coding	Numeric (percentage)

Variable Name	`fit_R2_30d5f`
Description	R-squared of a 5-fold cross-validation LASSO market model with estimation window of size [-30; -3] days.
Coding	Numeric (percentage)

Variable Name	`car_30d5f`
Description	Daily cumulative abnormal stock returns. Running sum of `abn_chg_30d5f`.
Coding	Numeric (percentage)

Variable Name	`fit_chg_30d3f`
Description	Daily predicted stock returns. Fitted values from a 3-fold cross-validation LASSO market model with estimation window of size [-30; -3] days.
Coding	Numeric (percentage)

Variable Name	`abn_chg_30d3f`
Description	Daily abnormal stock returns. Difference between `obs_chg` and `fit_chg_30d3f`.
Coding	Numeric (percentage)

Variable Name	`fit_R2_30d3f`
Description	R-squared of a 3-fold cross-validation LASSO market model with estimation window of size [-30; -3] days.
Coding	Numeric (percentage)

Variable Name	`car_30d3f`
Description	Daily cumulative abnormal stock returns. Running sum of `abn_chg_30d3f`.
Coding	Numeric (percentage)

Variable Name	`fit_chg_180dOLS`
Description	Daily predicted stock returns. Fitted values from an OLS market model with estimation window of size [-180; -3] days.
Coding	Numeric (percentage)

Variable Name	`abn_chg_180dOLS`
Description	Daily abnormal stock returns. Difference between `obs_chg` and `fit_chg_180dOLS`.
Coding	Numeric (percentage)

Variable Name	`fit_R2_180dOLS`
Description	R-squared of an OLS market model with estimation window of size [-180; -3] days.
Coding	Numeric (percentage)

Variable Name	`car_180dOLS`
Description	Daily cumulative abnormal stock returns. Running sum of `abn_chg_180dOLS`.
Coding	Numeric (percentage)

Variable Name	`fit_chg_var`
Description	Daily predicted stock returns. Fitted values from a 15-fold cross-validation LASSO market model with estimation window of size [-30; -5] days.
Coding	Numeric (percentage)

Variable Name	`abn_chg_var`
Description	Daily abnormal stock returns. Difference between `obs_chg` and `fit_chg_var`.
Coding	Numeric (percentage)

Variable Name	`fit_R2_var`
Description	R-squared of a 15-fold cross-validation LASSO market model with estimation window of size [-30; -5] days.
Coding	Numeric (percentage)

Variable Name	`car_var`
Description	Daily cumulative abnormal stock returns. Running sum of `abn_chg_var`.
Coding	Numeric (percentage)