**Metadata Guide**

for “Term Premia in Emerging Markets” by Pavel Solís

This file documents the data sources used in the study. All the data files used are in the Data folder, which contains four subfolders: Raw, Analytic, Aux and Metadata (where the current file is located). The Raw folder contains files downloaded from different sources. The Analytic folder contains files created to do the analysis in the paper. The Aux folder may contain supplementary files. This guide describes the data files in the Raw and Analytic folders.

|  |
| --- |
| **Raw Folder** |

Each time you obtain a new *original data file*, add an entry for that file here right away.[[1]](#footnote-1) For each of those files, this guide is intended to provide the kind of information typically found in a codebook accompanying a dataset a user would need to know to work with and interpret the data appropriately.

1. **Metadata for ‘AE\_EM\_Curves\_Tickers.xlsx’**

The file consolidates and expands (with tenors and tickers) the information contained in ‘original\_LC\_Sovereign\_Risk\_Bloomberg\_Tickers.xlsx’ and ‘original\_CIP\_Data\_Tickers.xlsx’ to construct a database of different swaps (basis swaps, interest rate swaps, non-deliverable cross-currency swaps, OIS) and yield curves (in local and foreign currency) for advanced economies and emerging markets. The tickers allow to construct the forward premium at different maturities.

* Additional information:

|  |  |
| --- | --- |
| Series: | Bloomberg tickers. |
| Units: | Percentages and basis points. |
| Period: | N/A. |
| Frequency: | Daily. |

1. **Metadata for ‘AE\_EM\_Curves\_BDH.xlsx’**

The first worksheet of the file uses the Bloomberg tickers in ‘AE\_EM\_Curves\_Tickers.xlsx’ and the BDH formula of the Bloomberg Excel Add-In to retrieve the historical values of the tickers.

The second worksheet of the file has all the Bloomberg tickers used in the first worksheet but stacked in a column.

1. **Metadata for ‘AE\_EM\_Curves\_Data.xlsx’**

The file contains the information downloaded using ‘AE\_EM\_Curves\_BDH.xlsx’.

Due to licensing, this file is not included in the replication folder but can be recreated by following the steps described in the next paragraph.

Once you open the file ‘AE\_EM\_Curves\_BDH.xlsx’ in a computer with access to a Bloomberg terminal and the Bloomberg Excel Add-in installed, the data will be automatically downloaded, it takes less than 5 minutes. By default, the data will be automatically downloaded from January 2000 up to the day before you open the file. If you want a different time period, first open the file in a computer with no access to Bloomberg and change the dates. Keep in mind that the dataset comprises more than 1,700 tickers and so there might be a chance that you exceed the Bloomberg data limits if you do it all at once, especially if data is downloaded frequently (e.g. shared terminal). If that is the case, you might want to download the data in blocks. Once the data is downloaded, copy the cells (starting in cell A5) and paste them as values & formatting in the first sheet (‘Data’) of the file ‘AE\_EM\_Curves\_Data.xlsb’ (starting in cell A1); otherwise, the first values for each ticker will not show up when you open the file later in a computer with no access to Bloomberg. For reference: The first date will appear in cell A2, the first ticker in cell B1, and the first value of the first ticker in cell B2. Save the file.

Last update: February 22, 2019

* Additional information:

Each column represents a ticker. Each row is a trading day. The cells report last prices.

|  |  |
| --- | --- |
| Series: | Rates, yields, exchange rates, forward points. |
| Units: | Percentages and basis points. |
| Period: | January 2000 to last update. |
| Frequency: | Daily. |

The second sheet (‘Identifiers’) of the file contains all the information associated with the *Bloomberg* tickers used in the first sheet. The information is the same as the one seen in the country sheets of the file ‘AE\_EM\_Curves\_Tickers.xlsx’ but in stacked form.

1. **Metadata for ‘EM\_Currencies\_DS.xlsx’**

The file shows how the output generated by Datastream should look like in order to follow the instructions below for updating the file ‘EM\_Currencies\_Data.xlsx’.

1. **Metadata for ‘EM\_Currencies\_Data.xlsx’**

The file contains data downloaded from Refinitiv Datastream. The tickers used appear in the worksheet “FX” of the file ‘AE\_EM\_Curves\_Tickers.xlsx’.

Due to licensing, this file is not included in the replication folder. To download the data, I recommend creating a local list in Datastream with the tickers just mentioned following the steps described in the next paragraph.

In the **Data Category window** choose ‘Exchange rates’, in the **Analysis window** select ‘Multiple Series / Flexible Chart > Time Series’. In the **Settings window** click the ‘Time Period’ button to select the starting and end dates as well as the frequency. In the top icon menu click the ‘List Wizard’ icon; a new window will show up. In the series navigator type the tickers from the worksheet “FX” of ‘AE\_EM\_Curves\_Tickers.xlsx’; to show similar tickers simultaneously, you can use the wildcard ‘\*’ (e.g. ‘USBRL\*F’). Once you have included all the tickers, save the list. Click ‘Run Now!’ to download the data.

Once the data is downloaded, make sure that the order of the output[[2]](#footnote-2) in row 4 matches the order in the second sheet (‘Identifiers’) of the file ‘EM\_Currencies\_Data.xlsx’, since the local list in Datastream may display a different order. If this is not the case, you need to change the order to that shown in the sheet ‘Identifiers’.

From the output generated by Datastream, copy the cells (starting in cell A7) and paste them as values & formatting in the first sheet (‘Data’) of the file ‘EM\_Currencies\_Data.xlsx’ starting in cell A2. Finally, from the sheet ‘Identifiers’ of the same file (‘EM\_Currencies\_Data.xlsx’) copy the column starting in cell C2 and paste it transposed in cell B1 of the sheet ‘Data’. For reference: The first date will appear in cell A2, the first ticker in cell B1, and the first value of the first ticker in cell B2. Save the file.

Last update: February 22, 2019

* Additional information:

|  |  |
| --- | --- |
| Series: | Exchange rates and forwards. |
| Units: | Local currencies per U.S. dollar. |
| Period: | January 2000 to last update. |
| Frequency: | Daily. |

The second sheet (‘Identifiers’) of the file contains all the information associated with the *Datastream* tickers used in the first sheet. The information is the same as the one seen in sheet ‘FX’ of the file ‘AE\_EM\_Curves\_Tickers.xlsx’.

1. **Metadata for ‘US\_Yield\_Curve\_Data.xlsx’**

* Bibliographic citation:

Gürkaynak, Refet S., Brian P. Sack, and Jonathan H. Wright. 2007. “The U.S. Treasury Yield Curve: 1961 to the Present,” *Journal of Monetary Economics* 54 (8): 2291–2304.

* Accessing the data:

The data file ‘feds200628.xls’ with daily US yield curve data was downloaded from

<https://www.federalreserve.gov/pubs/feds/2006/200628/200628abs.html>

The first time you open the file an Excel alert message will appear saying that the file format and extension don’t match, click on ‘Yes’ to open it. Save the file with name ‘US\_Yield\_Curve\_Data.xlsx’.

Last update: March 3, 2019

* Additional information:

|  |  |
| --- | --- |
| Series: | SVENY01-SVENY30, BETA0-BETA3, TAU1, TAU2 |
| Description: | Continuously compounded zero-coupon yields and estimated parameters for the Nelson-Siegel-Svensson (NSS) model |
|  | Annual maturities for 1Y-9Y and from 10Y:5Y:30Y. For maturities of 3- 6- and 9-months, the yields are obtained by substituting the estimated parameters in the NSS model.  Every day after fitting the curve to off-the-run U.S. Treasury bonds with the NSS model, the (zero coupon, par, forward) yield curve is reported with maturities up to 30 years (starting in 1985; although the data goes back to 1961 but with maturities of less than 30 years).  The latest available date is shown at the top. |
| Units: | Yields expressed in percentages. |
| Period: | January 2000 to a few days before the last update. |
| Frequency: | Daily. |

1. **Metadata for ‘CIP\_Data.dta’, ‘CIP\_Data.xlsx’, ‘CIP\_Tickers.xlsx’**

* Bibliographic citation:

Du, Wenxin and Jesse Schreger (2016). “Local Currency Sovereign Risk.” *Journal of Finance*, 71, 1027-1070.

Du, Wenxin, Joanne Im, and Jesse Schreger (2018). “The U.S. Treasury Premium.” *Journal of International Economics*, 112, 167-181.

* Accessing the data:

The data files were downloaded from

<https://sites.google.com/site/wenxindu/data/govt-cip>

Last update: February 12, 2019

* Additional information:

*‘CIP\_Tickers.xlsx’*

|  |  |
| --- | --- |
| Series: | Bloomberg and Datastream tickers |
| Description: | Swap and yield curves of advanced economies and emerging markets |
|  | Tickers to construct fixed-for-fixed local currency/dollar cross-currency swap rates (using basis swaps, interest rate swaps, non-deliverable cross-currency swaps), and tickers for local currency yield curves. |
| Units: | Percentages and basis points. |
| Period: | N/A. |
| Frequency: | Daily. |

*‘CIP\_Data.dta’, ‘CIP\_Data.xlsx’*

|  |  |
| --- | --- |
| Series: | diff\_y, rho, cip\_govt |
| Description: | Sovereign interest rate differential, forward premium and CIP deviations for advanced economies and emerging markets with respect to the U.S. |
| Units: | Percentages (diff\_y, rho) and basis points (cip\_govt) |
| Period: | Starting date varies per country (earliest April 1991) to last update. |
| Frequency: | Daily |

1. **Old: Metadata for ‘original\_LC\_Sovereign\_Risk\_Bloomberg\_Tickers.xlsx’**

* Bibliographic citation:

Du, Wenxin and Jesse Schreger (2016). “Local Currency Sovereign Risk.” *Journal of Finance*, 71, 1027-1070.

* Accessing the data:

The data files were downloaded from <https://sites.google.com/site/wenxindu/research>

Last update: March 5, 2018

* Additional information:

In the file, tickers in yellow mean that there is no data for that ticker. A ticker in blue means that the data does not cover the entire sample period.

An internet appendix describing yield curve construction can also be found in the URL given above.

|  |  |
| --- | --- |
| Series: | Bloomberg tickers. |
| Description: | Swap and yield curves of emerging markets. |
|  | Tickers to construct fixed-for-fixed local currency/dollar cross-currency swap rates (using basis swaps, interest rate swaps, non-deliverable cross-currency swaps), and tickers for local currency *and* foreign currency yield curves. |
| Units: | Percentages and basis points. |
| Period: | N/A. |
| Frequency: | Daily. |

1. **Metadata for ‘IMF\_Country\_Codes.xlsx’**

* Accessing the data:

The file named ‘co.xlsx’ contains the ISO and the IMF country codes. The data file was downloaded on April 16, 2018 from <https://www.imf.org/external/pubs/ft/weo/2014/01/weodata/co.xlsx>

* Additional information:

|  |  |
| --- | --- |
| Series: | IMF country codes. |
| Description: | Codes used by the IMF to identify countries and regions. |
| Units: | 3-digit numbers. |
| Period: | N/A. |
| Frequency: | N/A. |

1. **Metadata for ‘ISO\_Currency\_Codes.xlsx’**

* Accessing the data:

The file named ‘list\_one.xls’ containing the ISO 4217 currency codes was downloaded on April 16, 2018 from <https://www.currency-iso.org/dam/downloads/lists/list_one.xls>

The original file was saved with extension ‘.xlsx’ so that it can be read by Matlab.

* Additional information:

|  |  |
| --- | --- |
| Series: | ISO 4217 codes. |
| Description: | International standard for currency codes. |
| Units: | 3-letter codes. |
| Period: | N/A. |
| Frequency: | N/A. |

1. **Metadata for ‘wide\_mar2019.xls**

* Bibliographic citation:

US monetary policy shocks based on GSS (2005).

* Accessing the data:

The data file named was accessed on March 2019.

* Additional information:

|  |  |
| --- | --- |
| Series: | MP1, ED8, ONRUN10 |
| Description: | Asset price changes in 2-hour windows from 15 minutes before to 1 hour and 45 minutes after a monetary policy announcement. |
| Units: | Percentages |
| Period: | February 1984 to March 2019. |
| Frequency: | FOMC meetings. |

1. **Metadata for ‘original\_ACM\_Term\_Premium.xlsx’**

* Bibliographic citation:

Adrian, T., Crump, R.K., Moench, E., 2013. “Pricing the Term Structure with Linear Regressions.” ﻿*Journal of Financial Economics*, 110, 110–138.

* Accessing the data:

The data file named ‘ACMTermPremium.xls’ was downloaded on September 19, 2018 from <https://www.newyorkfed.org/research/data_indicators/term_premia.html>

Save the file with name ‘original\_ACM\_Term\_Premium’ and extension ‘.xlsx’ to be able to read it from Matlab.

* Additional information:

|  |  |
| --- | --- |
| Series: | ACMYXX, ACMTPXX, ACMRNYXX |
| Description: | Estimated zero-coupon yields, term premium and expected future short rate from 1 to 10 years |
| Units: | Percentages |
| Period: | June 1961 to August 2018 |
| Frequency: | Monthly and Daily |

1. **Metadata for ‘EPU\_Index\_YYY.xlsx’ and ‘import\_EPU\_Index\_ZZZ.xlsx’**

YYY: BRL, COP, KRW, MXN, RUB; ZZZ: BRL, MXN, RUB

* Bibliographic citation:

Scott R. Baker, Nicholas Bloom, Steven J. Davis. 2016. “Measuring Economic Policy Uncertainty,” *The Quarterly Journal of Economics* 131 (4), 1593–1636.

* Accessing the data:

The files for all countries with available data were downloaded from:

[http://www.policyuncertainty.com](http://www.policyuncertainty.com/brazil_monthly.html)

Last update: July 2, 2020

For some reason, Matlab does not read the files for BRL, MXN and RUB as downloaded. To be able to read them, do the following:

Copy all and paste values in a new file; select all numbers in the first column and right-click the error icon; click ‘Convert to Number’; save the file as ‘importable\_EPU\_Index\_ZZZ.xlsx’

* Additional information:

Newspaper-based economic policy uncertainty indexes, which are constructed by counting the number of articles in local newspapers that contain terms from a pool of chosen terms (e.g. economy, uncertainty, central bank).

|  |  |
| --- | --- |
| Series: | Brazil News-Based EPU |
| Period: | January 1991 to September 2018 |

|  |  |
| --- | --- |
| Series: | EPUC: Economic Policy Uncertainty Colombia |
| Period: | March 1994 to December 2016 |

|  |  |
| --- | --- |
| Series: | New South Korean EPU Index |
| Period: | January 1990 to July 2018 |

|  |  |
| --- | --- |
| Series: | Mexican Policy Uncertainty Index |
| Period: | January 1996 to September 2018 |

|  |  |
| --- | --- |
| Series: | News-Based Policy Uncertainty Index |
| Period: | January 1994 to September 2018 |

In all cases:

|  |  |
| --- | --- |
| Units: | Index numbers |
| Frequency: | Monthly |

1. **Metadata for ‘Macro\_Vars\_Tickers.xlsx’**

* Additional information:

|  |  |
| --- | --- |
| Series: | Bloomberg tickers |
| Description: | Macroeconomic and financial variables |
| Units: | Percentages, indexes, levels |
| Period: | N/A |
| Frequency: | Daily, monthly |

1. **Metadata for ‘Macro\_Vars\_BDH.xlsx’**

The file uses the tickers in ‘Macro\_Vars\_Tickers.xlsx’ and the BDH formula of the Bloomberg Excel Add-In to retrieve the historical values of the tickers.

1. **Metadata for ‘Macro\_Vars\_Data.xlsx’**

The file contains the information downloaded using ‘Macro\_Vars\_BDH.xlsx’.

The data was downloaded on May 10, 2019 from Bloomberg.

Due to licensing, this file is not included in the replication folder but can be recreated by following steps similar to those described for ‘AE\_EM\_Curves\_Data.xlsx’, which are summarized here: (1) first change the dates (if you want to) in the file ‘Macro\_Vars\_BDH.xlsx’, (2) open the file in a computer with access to Bloomberg, (3) copy all cells (starting from cell A5) and paste them as values in a new file (starting in cell A1), (4) save the new file as ‘Macro\_Finance\_Data.xlsx’.

* Additional information:

Each column represents a ticker. Each row is a day. The cells report last values.

|  |  |
| --- | --- |
| Series: | Inflation, unemployment, industrial production, GDP growth, Vix |
| Description: | Macroeconomic and financial variables for advanced economies and emerging markets |
| Units: | Percentages, indexes, levels |
| Period: | January 2000 to May 2019 |
| Frequency: | Daily, monthly but shown at daily frequency (i.e. values are repeated daily until the next available value). |

1. **Metadata for ‘original\_BIS\_CB\_Policy\_Rates.xlsx’**

* Bibliographic citation:

BIS policy rate statistics

* Accessing the data:

The data file was downloaded on April 24, 2019 from <https://www.bis.org/statistics/cbpol.htm>

* Additional information:

|  |  |
| --- | --- |
| Series: | M:BR, M:CO, M:HU, M:ID, M:IL, M:KR, M:MX, M:MY, M:PE, M:PH, M:PL, M:RU, M:TH, M:TR, M:ZA |
| Description: | Central bank policy rates |
| Units: | Percent per year |
| Period: | January 1946 to March 2019 |
| Frequency: | Monthly |

Additional details are in Data->Metadata-> BIS\_CB\_Policy\_Rates.pdf

1. **Metadata for ‘CE\_Forecasts.xlsx’**

* Bibliographic citation:

Asia Pacific Consensus Forecasts, Eastern European Consensus Forecasts, Latin American Consensus Forecasts

* Accessing the data:

The data file was constructed manually by consulting the periodic publications by Consensus Economics mentioned above.

* Additional information:

|  |  |
| --- | --- |
| Series: |  |
| Description: | 1 to 5 years and long-term inflation and GDP growth forecasts for the emerging markets in the sample |
| Units: | Percent per year |
| Period: | April 2001to October 2017 |
| Frequency: | Semiannually |

1. **Metadata for ‘Global\_IP\_Index.xlsx’**

* Bibliographic citation:

Baumeister, C. and J.D. Hamilton (2019), "Structural Interpretation of Vector Autoregressions with Incomplete Identification: Revisiting the Role of Oil Supply and Demand Shocks," American Economic Review, 109(5), 1873-1910.

* Accessing the data:

The data file named was downloaded from:

<https://sites.google.com/site/cjsbaumeister/OECD_plus6_industrial_production.xlsx?attredirects=0&d=1>

Last update: July 2, 2020

* Additional information:

|  |  |
| --- | --- |
| Series: | OECD+6NME industrial production |
| Description: | Index of global industrial production as a measure of real economic activity. |
| Units: | Percentage. |
| Period: | January 1958 to April 2020. |
| Frequency: | Monthly. |

1. **Metadata for ‘shipping\_costs.xlsx’**

* Bibliographic citation:

James D. Hamilton, "Measuring Global Economic Activity", Journal of Applied Econometrics, 2020.

* Accessing the data:

The data file named was downloaded from:

<http://econweb.ucsd.edu/~jhamilto/shipping_costs.xlsx>

Last update: July 3, 2020

* Additional information:

|  |  |
| --- | --- |
| Series: | Cyclical component |
| Description: | Cyclical component of real cost of shipping. |
| Units: | Percentage. |
| Period: | January 1970 to September 2019. |
| Frequency: | Monthly. |

1. **Metadata for ‘Kilian\_Index\_Corrected.txt**

* Bibliographic citation:

Kilian, Lutz. Measuring Global Real Economic Activity: Do Recent Critiques Hold Up to Scrutiny? 2019.

* Accessing the data:

The data file named was downloaded from:

<https://sites.google.com/site/lkilian2019/research/data-sets>

Last update: July 2, 2020

* Additional information:

|  |  |
| --- | --- |
| Series: | Index |
| Description: | Index of shipping costs as a measure of global real economic activity, monthly percent deviations from trend. |
| Units: | Percentage. |
| Period: | 1968.1-2020.4. |
| Frequency: | Monthly. |

1. **Metadata for ‘Mean\_TBILL\_Level.xlsx’ and ‘Mean\_BILL10\_Level.xlsx’**

Files are located in **SFP** folder.

* Accessing the data:

3-Month Treasury Bill Rate (TBILL)

<https://www.philadelphiafed.org/research-and-data/real-time-center/survey-of-professional-forecasters/data-files/tbill>

CPI Inflation Rate (CPI)

<https://www.philadelphiafed.org/research-and-data/real-time-center/survey-of-professional-forecasters/data-files/cpi>

5-Year CPI Inflation Rate (CPI5YR)

<https://www.philadelphiafed.org/research-and-data/real-time-center/survey-of-professional-forecasters/data-files/cpi5yr>

10-Year CPI Inflation Rate (CPI10)

<https://www.philadelphiafed.org/research-and-data/real-time-center/survey-of-professional-forecasters/data-files/cpi10>

10-Year Bill Return (BILL10)

<https://www.philadelphiafed.org/research-and-data/real-time-center/survey-of-professional-forecasters/data-files/bill10>

Deadline and Release Dates

<https://www.philadelphiafed.org/-/media/research-and-data/real-time-center/survey-of-professional-forecasters/spf-release-dates.txt?la=en>

Last update: July 28, 2020

* Additional information:

|  |  |
| --- | --- |
| Series: | TBILL6, TBILLA, TBILLB, TBILLC, TBILLD, BILL10, CPI6, CPIA, CPIB, CPIC, CPI5YR, CPI10 |
| Description: | Annualized percentage points. Averages. |
| Units: | Percentages. |
| Period: | Quarterly averages since 1981. Annual averages since 1992. |
| Frequency: | Quarterly and annually. |

|  |
| --- |
| **Analytic Folder** |

.mat files

.dta files

Files that could be deleted later: original\_Zero\_Swap\_\*,

1. **Metadata for ‘2006BC\_ECRI.pdf**

* Bibliographic citation:

Economic Cycle Research Institute (ECRI).

* Accessing the data:

The data file was downloaded on August 8, 2020 from

<https://www.businesscycle.com/ecri-business-cycles/international-business-cycle-dates-chronologies>

* Additional information:

Business Cycle Peak and Trough Dates, 22 Countries, 1949-2019. Based on a methodology analogous to that used to determine ECRI's international business cycle dates.

1. **Metadata for ‘filename.EXT’**

* Bibliographic citation:

G, R S

* Accessing the data:

The data file named was downloaded on February 13, 2018 from

* Additional information:

|  |  |
| --- | --- |
| Series: | Bloo |
| Description: | Zero-coupon |
|  | Tickers. |
| Units: | Percentages |
| Period: | January 2005 to |
| Frequency: | Daily |

|  |
| --- |
| **Aux Folder** |

This contain files in auxiliary analysis

1. **Metadata for ‘Mean\_TBILL\_Level.xlsx’ and ‘Mean\_BILL10\_Level.xlsx’**

* Accessing the data:

3-month Treasury bills: Quarterly average.

<https://www.philadelphiafed.org/research-and-data/real-time-center/survey-of-professional-forecasters/data-files/tbill>

10-Year Bill Return (BILL10): Annual average return over the current and next nine years.

<https://www.philadelphiafed.org/research-and-data/real-time-center/survey-of-professional-forecasters/data-files/bill10>

Deadline and Release Dates

<https://www.philadelphiafed.org/-/media/research-and-data/real-time-center/survey-of-professional-forecasters/spf-release-dates.txt?la=en>

The data file named was downloaded on May 29, 2020

* Additional information:

|  |  |
| --- | --- |
| Series: | TBILL1, TBILL2, TBILL3, TBILL4, BILL10 |
| Description: | Annualized percentage points. Averages. |
| Units: | Percentages. |
| Period: | Quarterly averages since 1981. Annual averages since 1992. |
| Frequency: | Quarterly and annually |

5-Year Forward 5-Year Annual-Average CPI Inflation Rate (CPIF5)

<https://www.philadelphiafed.org/research-and-data/real-time-center/survey-of-professional-forecasters/data-files/cpif5>

3-Month Treasury Bill Deflated by Same-Quarter CPI Inflation (RR1\_TBILL\_CPI)

<https://www.philadelphiafed.org/research-and-data/real-time-center/survey-of-professional-forecasters/data-files/rr1_tbill_cpi>

1. The additional information part may include sampling methods and weights, a description of the population from which the sample was drawn, or the structure of the data (e.g. long vs wide format). [↑](#footnote-ref-1)
2. See ‘EM\_Currencies\_DS.xlsx’ for an example of the output from Datastream. [↑](#footnote-ref-2)