**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 three subfolders: Raw, Analytic and Temp. The Raw folder contains files downloaded from other sources. The Analytic folder contains files created for the analysis in the paper. The Temp folder is used for temporary or non-relevant files. This guide describes the data files in both the Raw and Analytic folders.

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| **Raw Folder** |

1. **Metadata for ‘original\_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 named ‘feds200628.xls’ with daily US yield curve data was downloaded on March 3, 2019 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 ‘original\_US\_Yield\_Curve\_Data’ and extension ‘.xlsx’.

* Additional information:

|  |  |
| --- | --- |
| Series: | BETA0, BETA1, BETA2, BETA3, TAU1, TAU2 |
| Description: | Estimated parameters for the Nelson-Siegel-Svensson (NSS) model |
|  | The estimated values are substituted in the NSS model to generate (continuously compounded) zero-coupon yields for different maturities, including those not reported in the original dataset (e.g. for 3 months or 6 months).  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: | Levels but generate yields in percentages |
| Period: | January 2000 to a few days before the file was downloaded |
| Frequency: | Daily |

1. **Metadata for ‘original\_CIP\_Data.dta’, ‘original\_CIP\_Data.xlsx’, ‘original\_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 on February 12, 2019 from

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

* Additional information:

*‘original\_CIP\_Tickers.xlsx’*

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

*‘original\_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), latest April 2018 |
| Frequency: | Daily |

1. **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 on March 5, 2018 from <https://sites.google.com/site/wenxindu/research>

* 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 allow to construct fixed-for-fixed local currency/dollar cross-currency swap rates (using basis swaps, interest rate swaps, non-deliverable cross-currency swaps). It also includes tickers for local currency *and* foreign currency yield curves. |
| Units: | Percentages and basis points |
| Period: | N/A |
| Frequency: | Daily |

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 ‘original\_EPU\_Index\_YYY.xlsx’ and ‘importable\_EPU\_Index\_ZZZ.xlsx’**

YYY: COP, KRW; 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 data files were downloaded on September 30, 2018 from

<http://www.policyuncertainty.com/brazil_monthly.html>

<http://www.policyuncertainty.com/colombia_monthly.html>

<http://www.policyuncertainty.com/korea_monthly.html>

<http://www.policyuncertainty.com/mexico_monthly.html>

<http://www.policyuncertainty.com/russia_monthly.html>

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 ‘original\_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 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 ‘original\_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 ‘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’. The data was downloaded on February 22, 2019 from Bloomberg.

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.

* 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 February 2019 |
| 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 several 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 on February 22, 2019 from Thomson Reuters 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[[1]](#footnote-1) 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.

* Additional information:

|  |  |
| --- | --- |
| Series: | Exchange rates and forwards |
| Units: | Local currencies per U.S. dollar |
| Period: | January 2000 to February 2019 |
| 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 ‘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 named 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

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| **Analytic Folder** |

.mat files

.dta files

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

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:[[2]](#footnote-2)

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

Each time you obtain a new ***original data file***, add a section about that file here.

For each of your original data files, the Metadata Guide provides 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.

Enter the required information right away each time you obtain a new ***original data file***.

1. See ‘EM\_Currencies\_DS.xlsx’ for an example of the output from Datastream. [↑](#footnote-ref-1)
2. Such as sampling methods and weights, a description of the population from which the sample was drawn, or the structure of the data in the file (e.g. each row a country/year pair, with each variable containing values of aparticular indicator vs each row a country/indicator pair, with each variable containing values for a particular year). [↑](#footnote-ref-2)