Country Portfolios on a Nationality Basis: Baseline Estimates, Holdings-Based

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This README file provides documentation for the file "Country_Portfolios_Nationality" (available in .xlsx and .dta formats), which contains estimated restatements of the U.S. Treasury International Capital (TIC) data and the IMF Coordinated Portfolio Investment Survey (CPIS) data on a nationality basis. We perform the restatement using the methodology outlined in Coppola, Maggiori, Neiman and Schreger (2020). We refer readers to the paper for full details on the data and methodology underlying our estimates. We request that users of these data acknowledge their source and recommend inclusion of the following sentence:

> "These data are based on the work in Coppola, Maggiori, Neiman and Schreger (2020) and were obtained from: www.globalcapitalallocation.com".

We offer two versions of the nationality-based statistics: "Tax Haven Only" reallocates only securities that, under residency, are issued by affiliates resident in tax havens, while "Full Nationality" applies our reallocation methodology to securities issued by affiliates from all countries. In this release we provide restated country portfolios for nine economies: the United States, European Monetary Union (EMU), Great Britain, Canada, Switzerland, Sweden, Denmark, Norway, and Australia. This release contains data for the years 2007 to 2017, with a few exceptions (see Section 2).

For the United States, we separately report positions in four asset classes: (i) common equities, (ii) corporate bonds, (iii) sovereign, agency, and local government (muni) bonds, and (iv) asset-backed securities. Corporate bond holdings are calculated as private debt minus asset-backed securities. We exclude holdings of non-common equity (fund shares as well as the "preferred and other" category in TIC). In general, the CPIS data do not break down bonds in

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subcategories, nor do they distinguish fund shares from common equity. For countries other than the United States, therefore, we report positions in two asset classes: (i) equities (including fund shares) and (ii) all bonds.

1 File Structure

Each of the two files has the following fields:

1. Year – Positions are measured at the end of December of this year
2. Investor_Name – Domicile country of the investors
3. Investor – 3-letter ISO code for the domicile country corresponding to Investor_Name
4. Asset_Class – Asset class of the investments
5. Asset_Class_Code – A code corresponding to the "Asset_Class" field. The codes are the following: (i) "E" for common equities; (ii) "BC" for corporate bonds; (iii) "BG" for sovereign, agency, and local government (muni) bonds; (iv) "BSF" for asset-backed securities; (v) "EF" for all equities (inclusive of fund shares); (vi) "B" for all bonds.
6. Issuer_Name – Country (residency or nationality) of issuer of bond or stock
7. Issuer – 3-letter ISO code for country (residency or nationality) of issuer of bond or stock corresponding to Issuer_Name
8. Position_Residency – The value of the holdings of "Investor" in securities issued by "Issuer" in "Asset_Class" (in millions of U.S. dollars), on a residency basis.[1]
9. Position_Nationality_TH_Only – The estimated value of the holdings of "Investor" in securities issued by "Issuer" in "Asset_Class" (in millions of U.S. dollars), on a nationality basis using the "Tax Haven Only" treatment
10. Position_Nationality_Full – The estimated value of the holdings of "Investor" in securities issued by "Issuer" in "Asset_Class" (in millions of U.S. dollars), on a nationality basis using the "Full Nationality" treatment

[1] Domestic holdings are estimated, as discussed in Coppola et al. (2020), since these are not directly observed in TIC or CPIS.

11. Residency_Flag – A binary variable indicating whether the position reported in the column "Position_Residency" corresponds to the raw TIC or CPIS data, reported as of December of "Year". This is generally the case, except in a few cases in which we use mid-year data or perform interpolations or extrapolations when positions are otherwise missing. Whenever we do not use the TIC or CPIS raw data, this variable is set to 1. See Section 2 for an explanation of the various cases in which the residency-based data deviates from the raw TIC or CPIS data.

12. Estimated_Common_Equity – CPIS pools together common equities and fund shares. We therefore estimate the common equity position as detailed in Coppola et al. (2020). We only apply our reallocation matrices to these estimated common equity positions. This field reports our estimated common equity positions. It is only populated for tax haven countries and when "Asset_Class_Code" is equal to EF.[2]

2 Details on the Data

In this section we provide additional details on the data included in the downloadable files.

Chronological coverage. We include data for the years 2007 to 2017 for all investing countries except Australia and Norway. For Australia, we only provide data for 2017 due to erratic CPIS reporting in prior years. For Norway we only report 2017 for reasons discussed below.

June reporting for Australia. All data are measured as of December of the relevant year, with the exception of Australia's positions for 2017, which are measured as of December 2017 when available, and as of June 2017 otherwise. Whenever we use June positions for Australia, the variable "Residency_Flag" is set to 1.

Missing data. For each investing country, the set of issuing countries that are included corresponds to the set of countries for which positions are reported in either TIC or CPIS at any point between 2007 and 2017. If an investing country reports a particular bilateral position in certain years but not others, the position reported in the column "Position_Residency" is linearly interpolated (in case bilateral positions are available in both prior and later years) or extrapolated. The extrapolation methodology back-fills the data using the first available position at the beginning of each bilateral time series, and forward-fills the data using the last available position

[2]For the "full nationality" adjustments, we assume that all equity investments in countries that are not tax havens are in common equities.

at the end of each bilateral time series. For holdings of asset-backed securities (U.S. only), for parsimony we set missing bilateral positions to zero rather than interpolating or extrapolating them, since all such positions correspond to bilaterals with very small holdings throughout the sample. In every case in which the value in "Position_Residency" is interpolated, extrapolated, or set to zero, and hence does not correspond to the value that one would observe in the raw TIC or CPIS data, the variable "Residency_Flag" is set to 1. This generally occurs only for a few smaller destinations, and we filled in the data in the interest of providing more continuous time series.

EMU data censoring. For positions of the EMU, in cases in which individual EMU member countries censor the respective bilateral positions in CPIS, the EMU position is the sum of all non-censored positions reported by EMU members. The only EMU members states that report censored positions in CPIS in our sample are: Estonia, Finland, Ireland, Malta, and Spain.

EMU equity positions in Luxembourg. We exclude the equity investments of the EMU into Luxembourg (omitted from the files) since these primarily reflect fund shares holdings and are therefore accounted for by the external assets of Luxembourg itself.

Norwegian holdings. In the process of conducting this research, we discovered a mistake in Norway's CPIS reporting of the bilateral composition of the positions of the Norwegian sovereign wealth fund (SWF). We contacted Statistics Norway and they rectified this mistake for the most recent data. We are in ongoing communication with them as they also update the data for 2007-2017. In the meantime, we use an internally constructed amended version of Norway's CPIS tables that replaces the SWF's holdings using the fund's own self-disclosed positions for 2017.

References

Coppola, Antonio, Matteo Maggiori, Brent Neiman, and Jesse Schreger, "Redrawing the Map of Global Capital Flows: The Role of Cross-Border Financing and Tax Havens," *Working Paper*, 2020.