IMF WEO Macroeconomic Forecasts Panel Dataset (MFPD)

Nour-eddine ECHCHARFI*[†]

May 14, 2024

Abstract:

I organized IMF WEO forecasts into a tidy dataset, covering GDP growth, CPI inflation, and current account balances for every country and year from 1990-2029. The data is from the WEO historical database, updated until 2029. This dataset offers extensive opportunities for analyzing and conducting empirical research, including assessments of IMF forecasts and studies on equilibrium exchange rates.

Keywords : IMF; Economic forecasts. **JEL Classification:** C23.

^{*}EIEA, Africa Business School, Mohammed VI Polytechnic University (UM6P).

[†]Correspondence. *E-mail address:* nordi.echcharfi@gmail.com

This paper introduces a dataset compiling IMF WEO macroeconomic forecasts. The dataset is arranged in a user-friendly format within an Excel spreadsheet. It includes WEO projections for GDP growth, CPI inflation, and the current account balance for the period 1990-2029.¹

Subject	Economics
Specific subject area	IMF WEO forecasting
Type of data	Table (Excel Format)
How data were acquired	Hand collected from IMF website
Data coverage	196 economies over the period 1990-2029.
Data accessibility	Repository name: Mendeley Data
	doi: 10.17632/8dt6xpp6x4.1
	URL: https://data.mendeley.com/datasets/8dt6xpp6x4/1

Table 1: Specifications Table

The IMF regularly produces forecasts of macroeconomic variables for a large number of economies around the world. The Fund publishes these projections twice a year (in April and October) as part of its World Economic Outlook (WEO) reports. The IMF relies primarily on information gathered by its country desk officers in the context of their missions to IMF member countries and through their ongoing analysis of the evolving situation in each country.

I arrange the WEO historical data into a tidy format, where variables are in columns, and each observation corresponds to a row (Wickham, 2014), and updated it until April 2024.² For every country c and every year t, the dataset contains WEO projections $f_{c,t,h}$ for horizons spanning from the current year t to t + 5. These forecasts are released biannually, in April and October. I supplement the dataset with two attributes for each country: (i) geographic region and (ii) income group. Moreover, I incorporate the actual values of GDP growth, inflation, and current account balance into the dataset.

The dataset covers 196 countries over the period 1990–2029. These countries are collected into eight groups or regions, namely South Asia (8 countries), Europe and Central Asia (32 counties), Middle East and North Africa (21 countries), Western Europe (19 countries), Sub-Saharan Africa (48 countries), Latin America and Caribbean (34), East Asia and Pacific (32 countries), and North America (2 countries).

This dataset can serve academic researchers, economists at central banks, and finance ministries, among others, in their various analyses. One practical application of this dataset is

¹ The IMF's forecasts for the four to six quarters ahead were interrupted in April 2020 due to the unprecedented economic uncertainty caused by the COVID-19 pandemic.

² The Historical WEO Forecasts Database is publicly available

to compare a country's forecasted GDP growth with regional and income group averages. For instance, Figure 1 compares Morocco's 2-year GDP growth forecast with the MENA region and lower-middle-income countries averages. This information is crucial for both policymakers and private investors. A compelling use of this dataset is to assess IMF forecasts during the COVID-19 pandemic.

The dataset allows for the assessment of IMF forecasting performance. The IMF and academic researchers have conducted a series of evaluations of WEO macroeconomic forecasts (Artis, 1996; Heinisch and Lindner, 2019; Ho and Mauro, 2016; Jakaitiene and Dees, 2012; Timmermann, 2007). In addition, a substantial body of literature examies the "optimism bias" in IMF forecasts (Aldenhoff, 2007; Beaudry and Willems, 2022; Carrière-Swallow and Marzluf, 2023; Dreher et al., 2008). Most studies on IMF forecast bias use regional data for developing countries, not country-specific data.³

Moreover, central banks can use the IMF's projections to assess the medium-term evolution of the real exchange rate. GDP growth and inflation rates are two fundamental variables that drive equilibrium exchange rates in medium- and long-run. Economists at central banks may use the dataset to compute predicted GDP growth and inflation for different horizons (1 to 5 years).

Furthermore, foreign investors may rely on this data to make strategic investment decisions, especially in countries with limited reliable alternative sources. Faster-growing countries attract more foreign investment and may signal positive investor sentiment, potentially leading to exchange rate appreciation.

Variable	Description
Country	The country's name
CCode	Country and Area Codes
WEO_year	The publication year of the WEO
region	The country's regional grouping
incomegroup	The country's income group
year	the year of forecast
exercise	WEO exercise (April or October)
h	The horizon (1,2,3,4, and 5 years)
ngdp_rpch	GDP growth (Annual percent change)
pcpi_pch	CPI inflation Inflation rate, average consumer prices
	(Annual percent change)
bca_gdp	Current account balances (% of GDP)

scription.

³ Exceptions include Dreher et al. (2008).



Figure 1: WEO GDP growth forecasts for one year and the subsequent 5 years.





Conflict of Interest:

I affirm that there are no known competing financial interests or personal relationships that could have influenced the work reported in this paper.

References

- Aldenhoff, Frank-Oliver (2007). "Are economic forecasts of the International Monetary Fund politically biased? A public choice analysis". In: *Rev. Int. Organ.* 2.3, pp. 239–260. ISSN: 1559-744X. DOI: 10.1007/s11558-006-9010-x. URL: https://doi.org/10. 1007/s11558-006-9010-x (cit. on p. 3).
- Artis, Michael J. (1996). "How Accurate are the Imf's Short-Term Forecasts? Another Examination of the World Economic Outlook". Washington D.C. (cit. on p. 3).
- Beaudry, Paul and Tim Willems (2022). "On the Macroeconomic Consequences of Over-Optimism". In: *Am. Econ. J. Macroecon.* 14.1, pp. 38–59. DOI: 10.1257/mac.20190332. URL: https://www.aeaweb.org/articles?id=10.1257/mac.20190332 (cit. on p. 3).
- Carrière-Swallow, Yan and José Marzluf (2023). "Macrofinancial Causes of Optimism in Growth Forecasts". In: *IMF Econ. Rev.* 71.2, pp. 509–537. ISSN: 2041-417X. DOI: 10.1057/ s41308-022-00187-3. URL: https://doi.org/10.1057/s41308-022-00187-3 (cit. on p. 3).
- Dreher, Axel, Silvia Marchesi, and James Raymond Vreeland (Oct. 2008). "The Political Economy of IMF Forecasts". In: *Public Choice* 137.1/2, pp. 145–171. ISSN: 00485829, 15737101. URL: http://www.jstor.org/stable/40270856 (cit. on p. 3).
- Heinisch, Katja and Axel Lindner (Feb. 2019). "For how long do IMF forecasts of world economic growth stay up-to-date?" In: *Appl. Econ. Lett.* 26.3, pp. 255–260. ISSN: 1350-4851. DOI: 10.1080/13504851.2018.1459035. URL: https://doi.org/10.1080/13504851. 2018.1459035 (cit. on p. 3).
- Ho, Giang and Paolo Mauro (2016). "Growth—Now and Forever?" In: *IMF Econ. Rev.* 64.3, pp. 526–547. ISSN: 2041-417X. DOI: 10.1057/imfer.2016.12. URL: https://doi.org/10.1057/imfer.2016.12 (cit. on p. 3).
- Jakaitiene, Audrone and Stephane Dees (Mar. 2012). "Forecasting the World Economy in the Short Term". In: *World Econ*. 35.3, pp. 331–350. ISSN: 0378-5920. DOI: https://doi.org/10.1111/j.1467-9701.2011.01433.x. URL: https://doi.org/10.1111/j.1467-9701.2011.01433.x (cit. on p. 3).
- Timmermann, Allan (Oct. 2007). "An Evaluation of the World Economic Outlook Forecasts". In: IMF Staff Pap. 54.1, pp. 1–33. ISSN: 10207635, 15645150. URL: http://www.jstor. org/stable/30036001 (cit. on p. 3).
- Wickham, Hadley (Sept. 2014). "Tidy Data". In: J. Stat. Softw. 59.10 SE Articles, pp. 1–23. DOI: 10.18637/jss.v059.i10.URL: https://www.jstatsoft.org/index.php/jss/ article/view/v059i10 (cit. on p. 2).