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MN FILE SUITE

Methodology Overview

DOCUMENT SCOPE

This document assumes the intro video has been watched and the website read in full, and describes the methodological framework that runs across all 13 files in the suite.

The detailed methodology, available on request, walks through each file's construction.

13 file-level methodology documents, provided with license, cover exact sources, data transformation formulas, and country-by-country specifics for each.

THE PIPELINE

Raw data enters as country-level series and exits as cross-country comparable signals. Where what a variable measures differs across countries, the input is rebuilt per country to a uniform definition before any calculation runs.

Each file then constructs its derived indicator from the prepared inputs.

All cyclical outputs then pass through the same standardization pipeline.

Z-SCORE STANDARDIZATION. Every cyclical indicator is expressed as a rolling Z-Score; the number of standard deviations the current reading sits from its trailing mean. This strips structural differences between countries and produces a dimensionless series directly comparable across borders.

Two variants are used. In-sample construction (the current observation included in its own reference distribution) is applied to bounded mean-reverting series where the current observation belongs to the distribution. Out-of-sample construction (the current observation excluded) is applied to trending series or series that undergo extended phase shifts, because including an extreme reading in its own reference window would inflate the standard deviation and suppress the signal at the moments the deviation is largest.

WINDOW SELECTION. Windows are calibrated per variable based on whether the series is stationary, trending, or subject to prolonged structural phases. Some variables use dual windows to separate tactical signal (fast detection of shifts) from structural signal (confirmation against a longer baseline). Quarterly

variables use shorter observation counts to maintain the same calendar coverage as monthly variables.

Cross-sectional ranking. Applied to time-series Z-Scores. Ranking standardized deviations measures which countries are experiencing unusual conditions relative to peers in comparable circumstances. Where structural CPI level differences across countries would dominate the comparison (e.g. money supply and bond yields), cross-sectional ranking is applied on a real basis only. The nominal time-series Z-Score remains valid country-by-country and is retained in those files for users who want the unadjusted view.

Breadth. Each breadth indicator is a dual-metric construction. Level breadth measures how many countries sit above their own historical baseline. Momentum breadth measures how many are accelerating. The divergence between the two carries information neither carries alone: high level with falling momentum, or low level with rising momentum, both signal turns before they appear in the level series.

Breadth is applied to cyclical flow variables where multi-country synchronization carries macro information independent of the level signal. It is excluded in four cases: pure pricing variables (exchange rates, equity valuations), where aggregate breadth collapses to a single-variable regime read already captured elsewhere; files without a rolling statistical baseline (fiscal accounts, economic freedom), where no "above own historical norm" condition is defined; and panels too small for stable breadth counts (Eurodollar Credit, 12 countries), where cross-sectional ranking is the more informative visualization.

Global aggregates. Twelve of the thirteen files produce GDP-weighted global aggregates where each country's signal is weighted by its share of nominal GDP in USD, with the denominator auto-normalizing to the reporting subset at each point in time. The Money Supply file is the exception because money supply is a stock variable measured in absolute units, so each country's cleaned aggregate is converted to USD and summed into a single global pool, then subjected to the same Z-Score and impulse framework applied to country-level signals.

COLOR FORMATTING

Signals where higher and lower readings carry universal directional meaning are colored. Signals where interpretation depends on context are not.

Expansionary signals use a green/red scale. CPI uses blue/red to distinguish cooling from heating. Yield curve shape (10s minus 2s) is colored within the rates file because steepening and inversion carry directional meaning; all other rate and pricing signals are uncolored. Bounds are calibrated so only statistically extreme readings register strong color.

CROSS-FILE LINKAGES

The 13 files were designed as one system. Shared inputs ensure the same country is measured the same way across files, making cross-file decomposition possible. Where one file's output feeds another as a raw input, the receiving file imports it directly rather than re-sourcing independently.

Few examples follow:

GDP weights from GDP file feed every weighted aggregate across the suite.

CPI deflates real money supply growth in Money Supply file and real rates and yields in Policy Rates & Bond Yields file.

The 10-year sovereign yield from Policy Rates & Bond Yields file is the risk-free rate input to the equity yield gap in Equity Valuations file.

End-of-month spot FX rates from Exchange Rates file convert national money supply aggregates to USD in Money Supply, making the global money pool calculation possible.

Nominal GDP in USD from GDP file converts Net International Investment Position to percent of GDP in Fiscal & External Accounts file.

DATA GOVERNANCE

All raw data comes from national central banks, statistical authorities, international institutions (BIS, IMF, OECD), exchanges, or private-sector data providers. Where licensing terms prevent redistribution of raw series (the Business Activity Surveys file and the Equities module), the suite provides pre-processed derived signals instead of raw inputs.

Raw and auxiliary input sheets contain hardcoded values, and all downstream calculations are formula-driven and automatically recalculate when new data is entered.

Any data adjustments (e.g., carried-forward values, interpolations, anomaly corrections) are documented in each file's methodology document.

As the suite is built in Excel, users are free to modify, restructure, or repurpose the model and its data as they see fit.