

## Forecast Changes: International Macro Models [October 2018]

### **Summary:**

October 2018 – As a part of the October vintage of the Moody's Analytics international macro forecasts, several model equations were revised. Changes in model methodology led to updates to the equations for Eurozone financials, commodity prices, and the stock price index. Additionally, we have added a number of new forecast series, principally in the United States and China, as well as two new commodity prices, for iron ore and palm oil.

### **Detail:**

To ensure the highest quality forecasts, Moody's Analytics will periodically add forecasts for series for which country data become available or revise history for existing concepts based on changes in how they are reported by their national offices. In addition, Moody's Analytics adjusts equations to improve model performance based on regular diagnostic testing each month.

In October, two examples of methodologically motivated changes led to changes in a range of concepts. Eurozone financials were adjusted to better imbed our detailed financial model and ensure consistency with previous stress-testing. The stock price index was re-specified to account for horizontal connections and capture more global linkages in the model. Several equation revisions to Colombia were made as a result of revisions to historical data.

Concepts added and removed from the baseline forecast are as follows. The corresponding alternative scenarios will be similarly affected.

### Methodological improvements

- Eurozone financials
  - Re-specified government bond yield 10 year [FRGT10Y]
  - Re-specified lending rate [FRLEND]
  - Re-specified monetary policy rate [FRMP & FRMP\_T]
  - Re-specified three-month [FREURIBOR3M] and 12-month [FREURIBOR12M] interest rate
  - Re-estimated money supply [FM1] and six-month interest rate [FREURIBOR6M]
- Re-specified real world commodities prices
  - Aluminum [FPCALUMINUM]
  - Copper [FPCCOPPER]
  - Metals [FPCIMETALS]
  - Oil [FPCOIL]
- Re-specified stock price index [FSPI] (all countries)

### Series additions

- United States
  - Commercial Banks: Assets - Bank Credit - Loans and Leases - Commercial Real Estate (Bil, \$, SA) [FBBABLLROCCBQ] (United States)
  - Commercial Banks: Assets - Bank Credit - Loans and Leases - Residential Real Estate (Bil, \$, SA) [FBBABLLR1CBQ] (United States)
  - Commercial Banks: Liabilities - Deposits (Bil. \$, SA) [FBBLDPCBQ] (United States)

- Delinquency Rates: Top 100 Commercial Banks - Credit Card Consumer Loans (%SA) [FBCFDELLCCQ\_US] (United States)
- Delinquency Rates: Top 100 Commercial Banks - C&I Loans (%SA) [FBCFDELLIQ] (United States)
- Delinquency Rates: Top 100 Commercial Banks - Commercial Real Estate Loans (% SA) [FBCFDELLRCQ] (United States)
- Delinquency Rates: Top 100 Commercial Banks - Residential Real Estate Loans (% SA) [FBCFDELLRRQ] (United States)
- Homeowner Vacancy Rate (% SA) [FHVAVHQ] (United States)
- S&P 500 EOQ [FSP500EQ] (United States)
- Weighted Average Exchange Value of U.S. Dollar: Major Currencies Index – Nominal [FTWDMJRQ] (United States)
- CPI: Owners Equivalent Rent of Residences [FCPIUEHC] (United States)
- 15-year swap rate [FIRSWP15YQ] (United States)
- 20-year swap rate [FIRSWP20YQ] (United States)
- China
  - Survey-based unemployment rate [FLBRS] (China)
  - Housing starts [FHST] (China)
  - Housing completions [FHCMP] (China)
  - Home sales [FHSL] (China)
  - Investment in residential buildings [FHCMPRES] (China)
- World
  - Real iron prices [FPCIRON] (World)
  - Real palm oil prices [FPCPALMOIL] (World)
- Latin America
  - CPI regulated prices [FCPIRG] (Brazil)
  - CPI unregulated prices [FCPINR] (Brazil)
  - IP – manufacturing [FIPMF] (Mexico)
  - Core CPI [FCPIX] (Mexico)
  - Government bond yield 10-year [FRGT10Y] (Peru)
- Europe
  - ULC - Eurostat-provided history [FULC] (Eurozone)

#### Changes from regular monthly model diagnostics

- FGGREV (Jordan)
- FG\$ (Algeria, Russia, Sweden)
- FPDIC (Algeria)
- FRLEND (Peru)
- FEGROW (Colombia)
- FRGT10Y (Switzerland, Norway, Japan, South Korea, Russia, Sweden, Ukraine)
- FC\$\_I (Colombia, Egypt, Estonia, Luxembourg)
- FRMP (Canada, Egypt, Laos)
- FRMP\_T (Canada)
- FIF\$\_I (Colombia)

- FII\$ (Colombia)
- FCU (Argentina, Croatia)
- FLBR (Australia, Germany, United Kingdom, South Korea, Netherlands, Lebanon)
- FHPI (Chile)
- FRMM (Bahrain, United Kingdom, Japan, Norway, Sweden)
- FGGEXP (Colombia, South Korea)
- FGGEXP\_I (Colombia)
- FNETEX\$\_I (Colombia, Nigeria, Vietnam)
- FPPI (Algeria)
- FCPI (Spain)
- FPPP (Jordan, Laos, Vietnam)
- FRGT3Y (South Korea)
- FGGDEBT (Laos)
- FREG (Luxembourg)
- FYPEWS (Mexico)
- FTABGDP\_T (Malta, Nigeria, Lithuania)
- FRGT5Y (Myanmar)
- FYPD (Portugal)
- FRGT3M (Russia)
- FIP (Vietnam)
- FGDPA\$\_I (Ireland)
- FGDPRE\$\_I (Ireland, Switzerland)
- FGDPSO\$\_I (Ireland)
- FGDPMQ\$\_I (Croatia, Romania)
- FGDPPS\$\_I (Croatia, Poland)
- FGDPCN\$\_I (Croatia)
- FGDPPD\$\_I (Hungary, Poland)
- FGDPI\$\_I (Hungary)
- FGDPEG\$\_I (Australia)
- FGDPTS\$\_I (Czech Republic, Bulgaria)
- FPCP (Australia, Canada)
- FFXIEUZN (Denmark)
- FYPEWAVG\$\_I (Israel)
- FRCD (Jordan)
- FGGTAXR\_I (South Korea)
- FEGVIN (Mexico)
- FLBREU (Netherlands)
- FPCRUBBER (Singapore)
- FGDP\$\_EQ (Colombia)