103: LIST OF VARIABLES

(foreign variables carry an asterisk, March 5, 2004
superscript e denotes the expected value of a variable or change)

1. Stock variables
   
   **K** Capital stock
   
   **W** Net wealth of a country (net claims on the future output of the rest of the world)
   
   **M** Domestic nominal money supply
   
   **M*** Foreign nominal money supply
   
   **B** Domestic (government) bonds

2. Flow variables
   
   **Y** Income (Output)—Gross National Product, the income generated by domestic factors of production in one year. \( Y^{GDP} \) roughly equals national income
   
   **C** Consumption of private households
   
   **G**, **T** Government spending, **T**: Taxes
   
   **I** Investment, \( I = \Delta K \) (increase of capital stock)
   
   **EX** Exports
   
   **IM** Imports
   
   **CA** Current account balance, assumed to be roughly \( CA = EX - IM \) (net exports).
   
   The financial view \( CA = \Delta W \) is correct.
   
   A current account surplus is equivalent to net foreign lending. Domestic consumers give up consumption of their goods today in exchange for future consumption of foreign goods. A current account surplus is therefore an accumulation of claims on the future output of the rest of the world. A current account deficit is equivalent to net borrowing from abroad. If private capital flows do not match the current account surplus (or deficit), the central increases or reduces its reserves accordingly. Reserves are part of the country’s net wealth.

   **S** Savings, \( S = I + CA = \Delta K + \Delta W \). In an open economy, national savings are applied to domestic investment and foreign lending.

   **Y** Output—Gross Domestic Product, the production of goods and services within domestic borders in one year. Domestic wealth invested abroad yields interest income for domestic residents: \( R^* \cdot W \). So, \( Y^{GDP} = R^* \cdot W + Y^{GDP} \) and the correct current account balance is \( CA = R^* \cdot W + EX - IM \).

3. Prices
   
   **E** Nominal (spot) exchange rate (denominated in [USD/units of foreign currency]). A nominal appreciation is a decrease of \( E \).
   
   **E*** Expected future nominal exchange rate.
   
   **F** Forward nominal exchange rate (denominated in [USD/units of foreign currency] tomorrow)
   
   **P** Domestic price level (price of domestic consumption basket). Individual prices: \( p_i \). So, \( P = a_1 p_1 + \ldots + a_i p_i + \ldots + a_N p_N \)

   **P*** Foreign price level (price of foreign basket)

   **q** Real exchange rate, defined as \( q = EP^* \) (denominated in quantities: [1]). It denotes the relative price of a unit of the foreign consumption basket (numerator) in terms of the domestic consumption basket (denominator). A real appreciation is equivalent to a lower \( q \).

   **R** Nominal interest rate

   **r** (Expected) real interest rate; \( R = r^e + \pi^e \).