FORMULAE USED TO DERIVE THE INDEX, GROWTH RATES, AND CONTRIBUTIONS TO THE ANNUAL GROWTH RATE

Index. If F_t represents the flow in month t and L_t the level outstanding at the end of month t, then the index I_t of adjusted stocks in month t is defined as:

$$I_t = I_{t-1} \times \left(1 + \frac{F_t}{L_{t-1}}\right) \qquad [1]$$

Growth rates. The annual percentage change a_t for month t, i.e. the change in the 12 months ending in month t, may be calculated using either of the following two formulae:

$$a_t = \left[\prod_{i=0}^{11}\left(1 + {F_{t-i}}\Big/{L_{t-1-i}}\right) - 1\right] \times 100 \text{ which is based on flows, or} \qquad [2]$$

$$a_t = \left({I_t}\Big/{I_{t-12}} - 1\right) \times 100 \text{ which is based on the index of adjusted stocks.} \qquad [3]$$

Similarly, the month-on-month percentage change a_t^M for month t may be calculated as:

$$a_t^M = \left({F_t}\Big/{L_{t-1}}\right) \times 100 \text{ which is based on flows, or} \qquad [4]$$

$$a_t^M = \left({I_t}\Big/{I_{t-1}} - 1\right) \times 100 \text{ which is based on the index of adjusted stocks.} \qquad [5]$$

Contributions to the annual growth rate of M3. If a_t (M3) represents the annual growth rate of M3 for the year ending in month t, and F_{t-i} (M1), F_{t-i} (M2-M1), F_{t-i} (M3-M2) are the monthly flows for the aggregates M1, M2-M1 and M3-M2 respectively in month t-i, then the contribution of, e.g., M1 to the annual growth rate of M3 is calculated as:

$$\frac{\sum_{i=0}^{11} F_{t-i}(\mathrm{M1})}{\sum_{i=0}^{11}\left[F_{t-i}(\mathrm{M1}) + F_{t-i}(\mathrm{M2-M1}) + F_{t-i}(\mathrm{M3-M2})\right]} \times a_t(\mathrm{M3}). \qquad [6]$$