Cross-border flows in a new economic environment:
Challenges and policy options for Latin America

THE IMPOSSIBLE TRINITY: BOLIVIAN EXPERIENCE

Central Bank of Bolivia

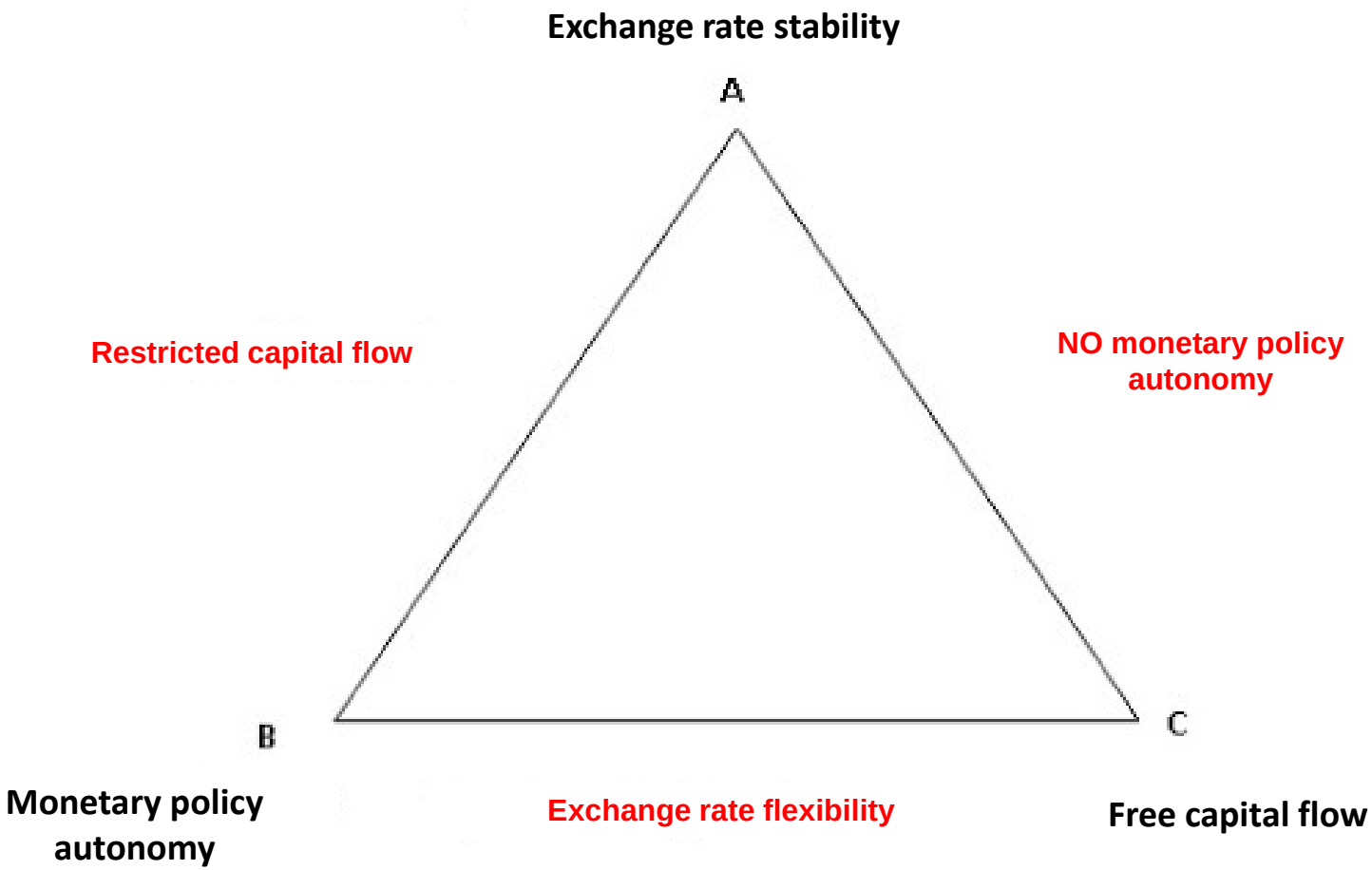
Mexico City, November 2017

Impossible trinity

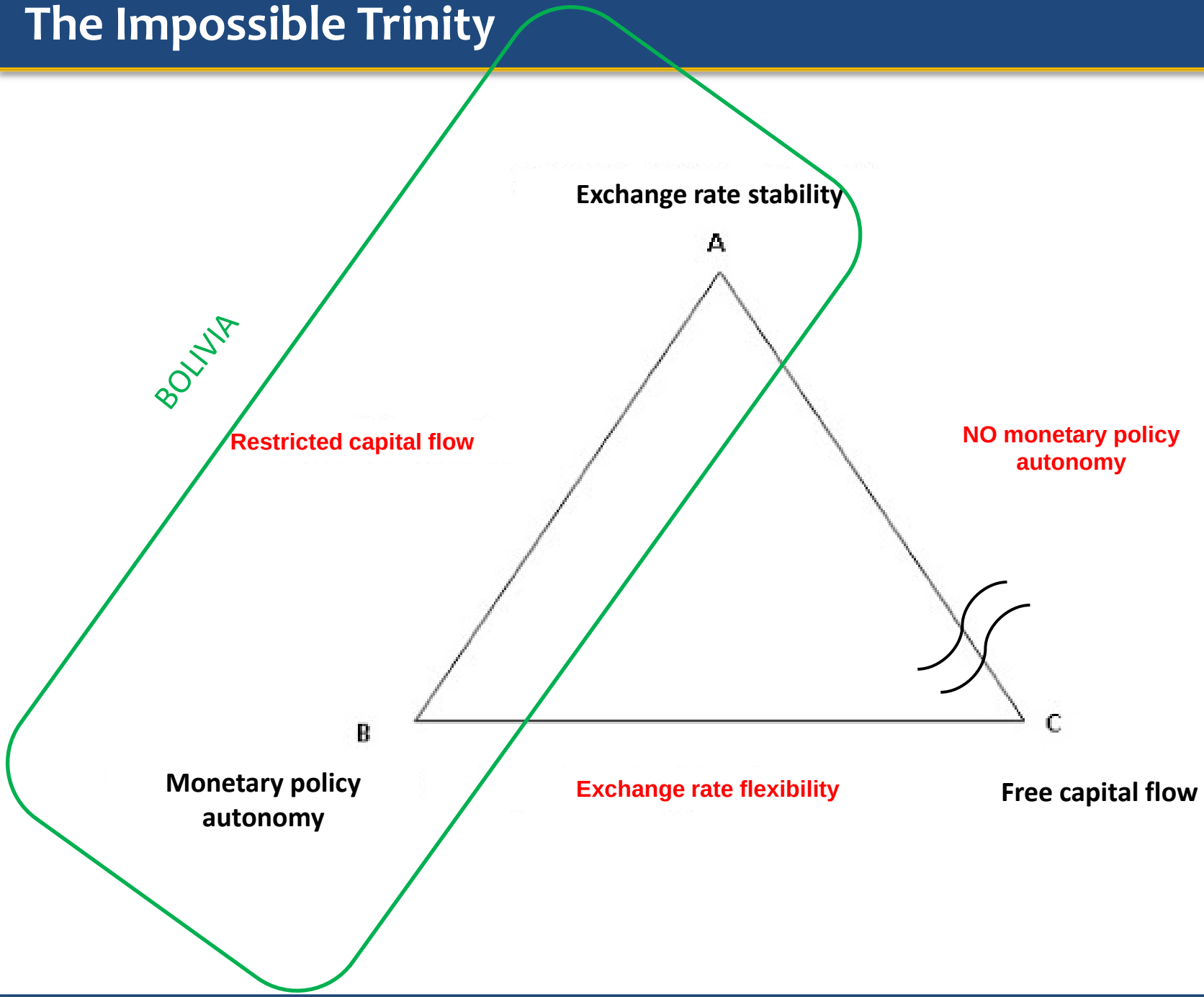
The analysis of the impossible trinity is very important in the case of Bolivia.

Since 2014, with the fall in international prices of raw materials, Bolivia maintains an expansive monetary policy and maintains a fixed exchange rate to encourage growth. However, in theory, these policies should involve capital outflows….

The Impossible Trinity



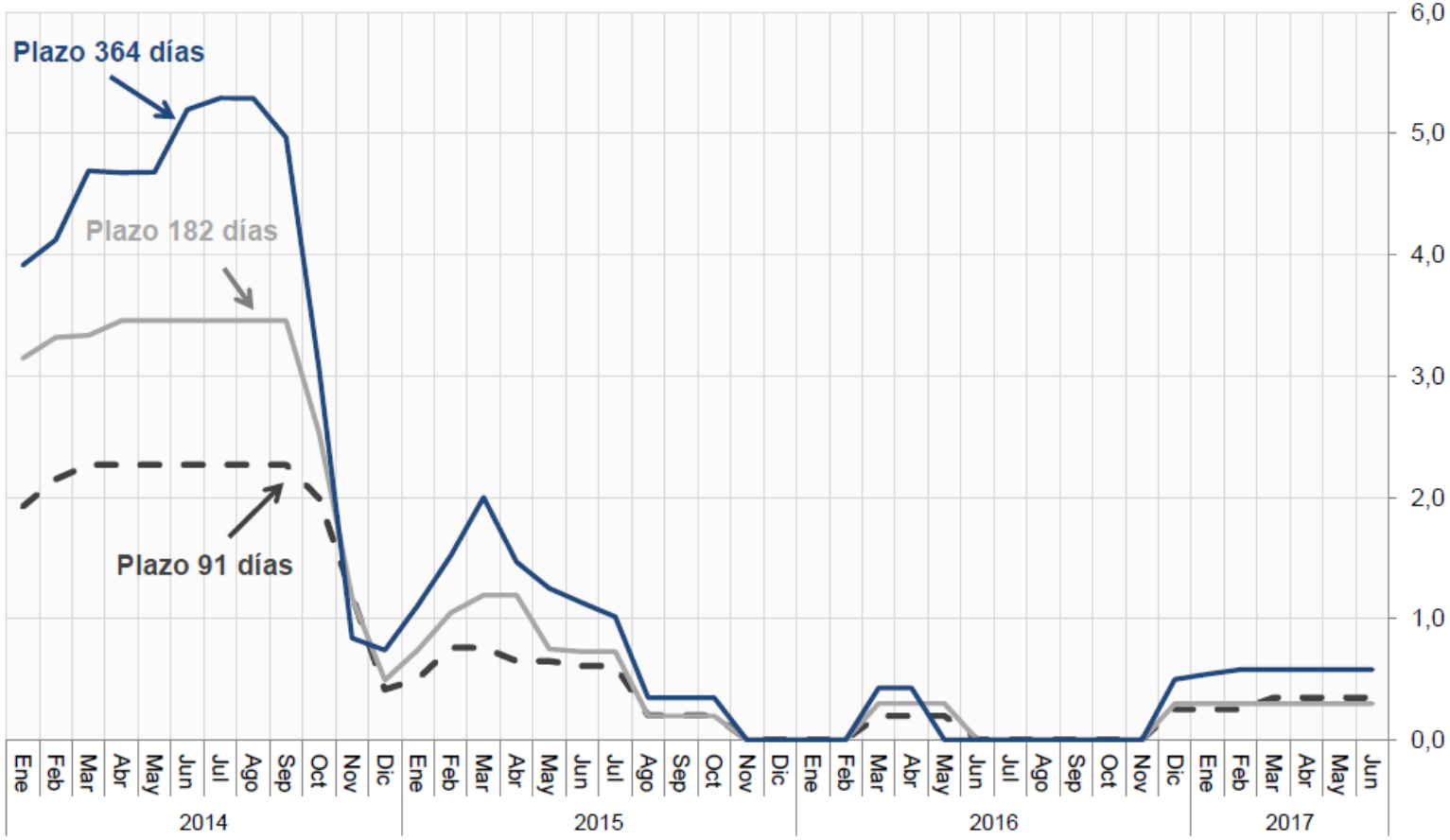
The Impossible Trinity



Expansive Monetary Policy

From mid-2014 the monetary policy stance was accommodative; the regulation instruments rates lessened near zero.

Annualized effective monetary regulation public bills rate
(In percentage)

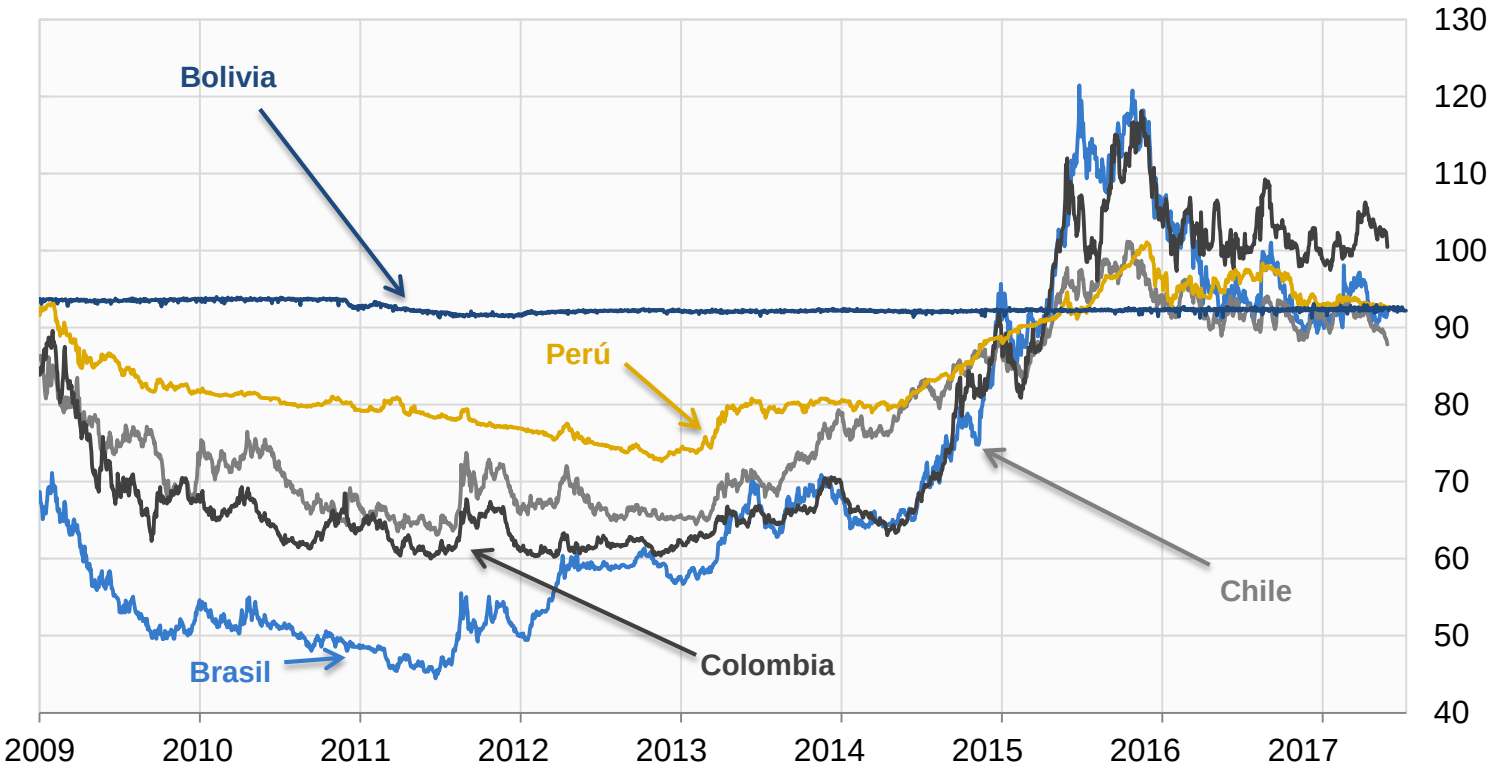


Source: Central Bank of Bolivia

Stable exchange rate policy

The regional exchange rates showed a volatile behaviour contrasting the bolivian stability.

Exchange rate variation index for selected economies
(Jan 2003 = 100)



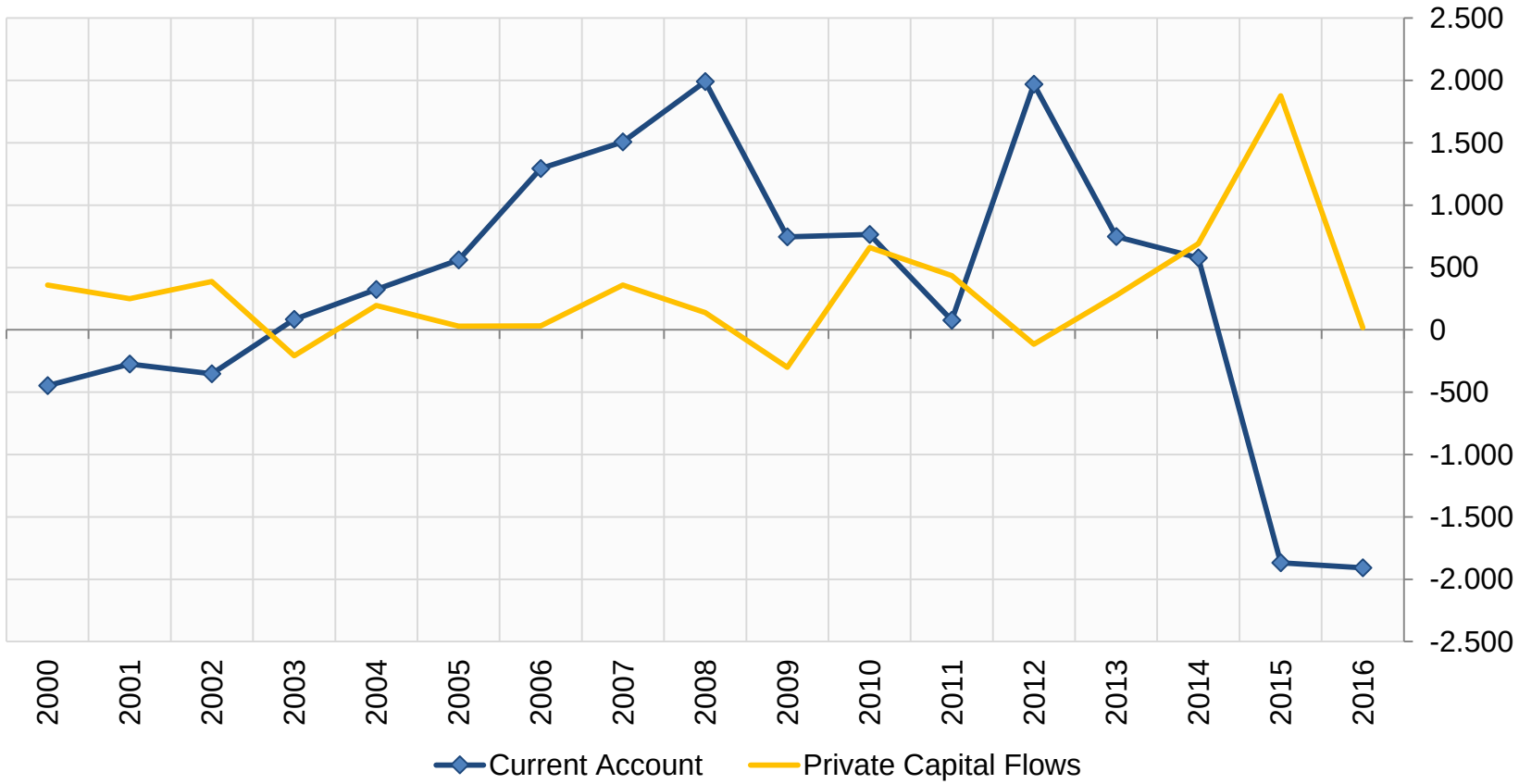
Source: *Bloomberg*
Note: A negative variation means an appreciation; a positive one means a depreciation

Capital Flow

Capital mobility

In the past, private capital flow in Bolivia were not that important compared to the current account flows.

Current Account and Private Capital Flow
(In millions of US dollars)



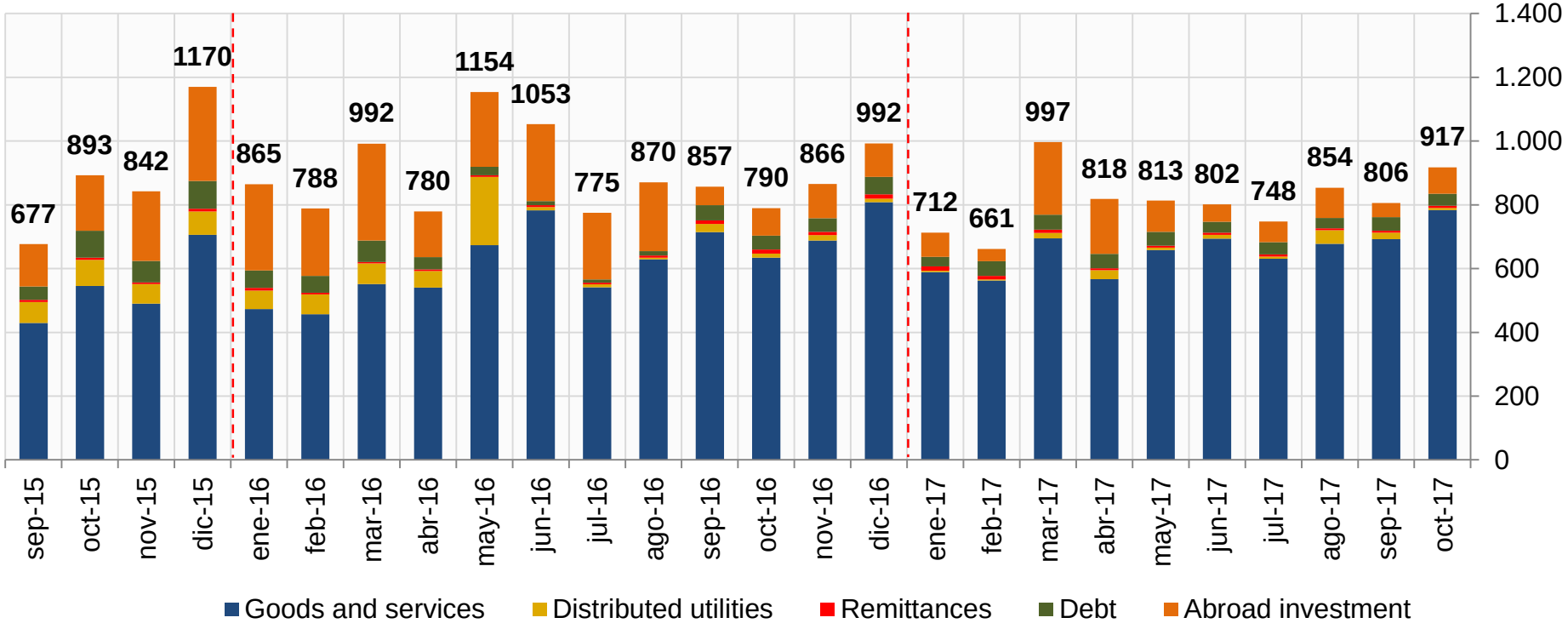
Source: Central Bank of Bolivia

Capital Flow

Capital Mobility

In detail, the **abroad bolivian transfers** mainly were related to **commerce operations** followed by **abroad investments,** although for the economy size these were rather small.

Abroad transfers by type
(In million of US dollars)



Source: Central Bank of Bolivia
Nota: With SCIP information at october 31 2017

Capital Flow

Capital Mobility

However, the empirical evidence shows that there is an outflow of capital flows due to the normalization process of monetary policy, mainly in the US.

$$\log\left(\text{Reservas}_t\right) = \underset{(-0,92)}{-0,83} + \underset{(2,79)}{0,62} \times \log(\text{Precio Internacional}_t) + \underset{(4,12)}{0,86} \times \log\left(\text{Bol}_t\right)$$

$$+ \underset{(3,22)}{0,37} \times \log\left(\frac{Q_t^X}{Q_t^M}\right) + \underset{(1,77)}{0,12} \times \log\left(\text{Remesas}_t\right) - \underset{(-2,11)}{0,05} \times \log\left(Excedente_{t-4}^{Liquidez}\right)$$

$$- \underset{(-2,66)}{0,04} \times \log\left(i_{t-2}^{USA} / i_{t-1}^{BOLIVIA}\right) + \varepsilon_t^{RIN}$$

Where

Reservas: Net foreign exchange reserves

i^{USA} : US monetary policy interest rate

Remesas: remittances

$Excedente^{Liquidez}$: excess of bank reserves on what is required

Bol: de-dollarization

Source: Central Bank of Bolivia

Impossible trinity

The analysis of the impossible trinity in Bolivia shows that there was no significant capital outflow. However, this must be a subject of constant analysis because:

- There was an outflow of capital, although in non-significant amounts
- There is not a very important difference in US and Bolivian interest rates. If the difference were greater, this effect can be significant.
- The theoretical model does confirm a significant relationship between Bolivia's international reserves and the interest rate differential.

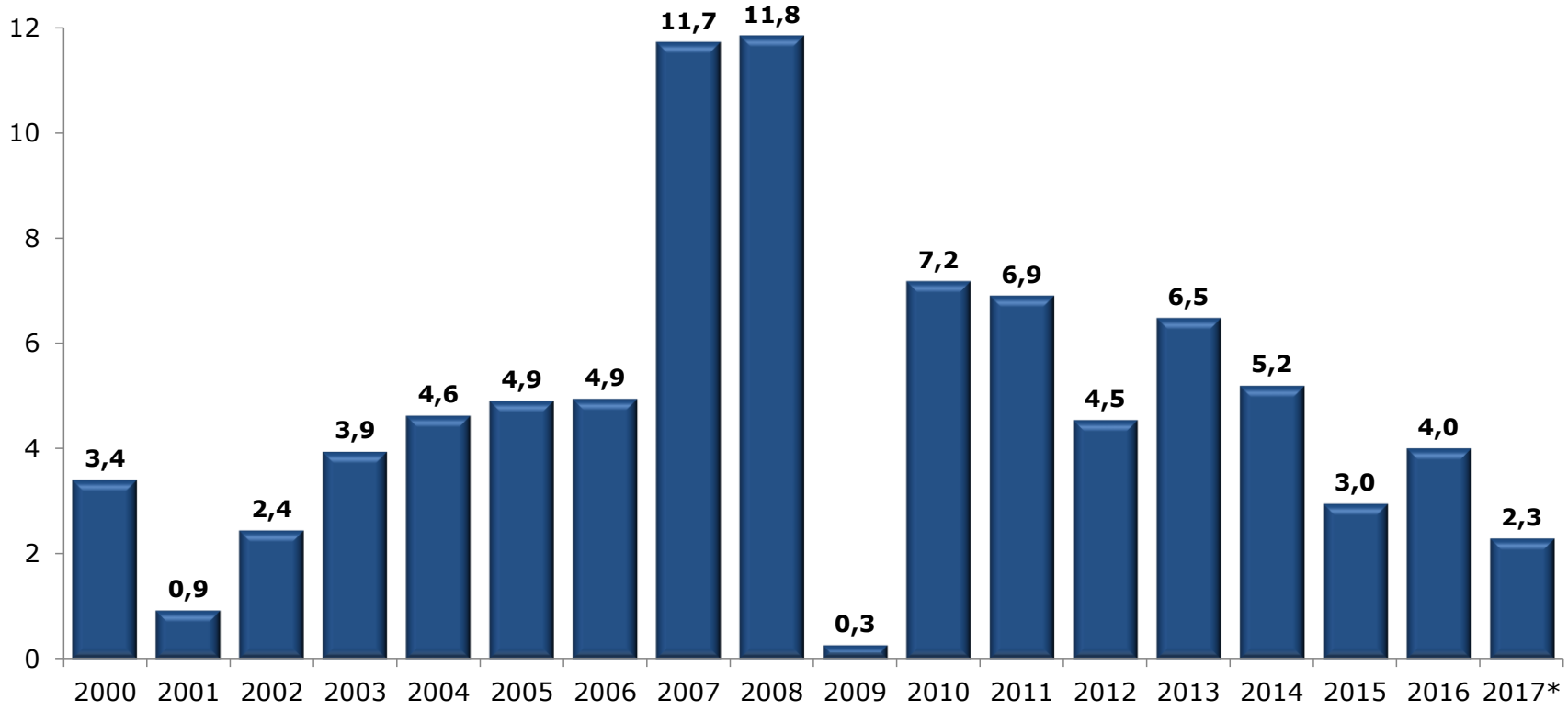
The expansive monetary policy and the fixed exchange rate helped Bolivia maintain important economic results….

Goals achieved: Controlled inflation

Low and controlled inflation

The stable exchange rate allowed maintaining a low cumulated inflation throughout all these years contrasting the other countries in the region.

BOLIVIA: Inflation
(in percentage)



Source: National Statistics Institute – Central Bank of Bolivia

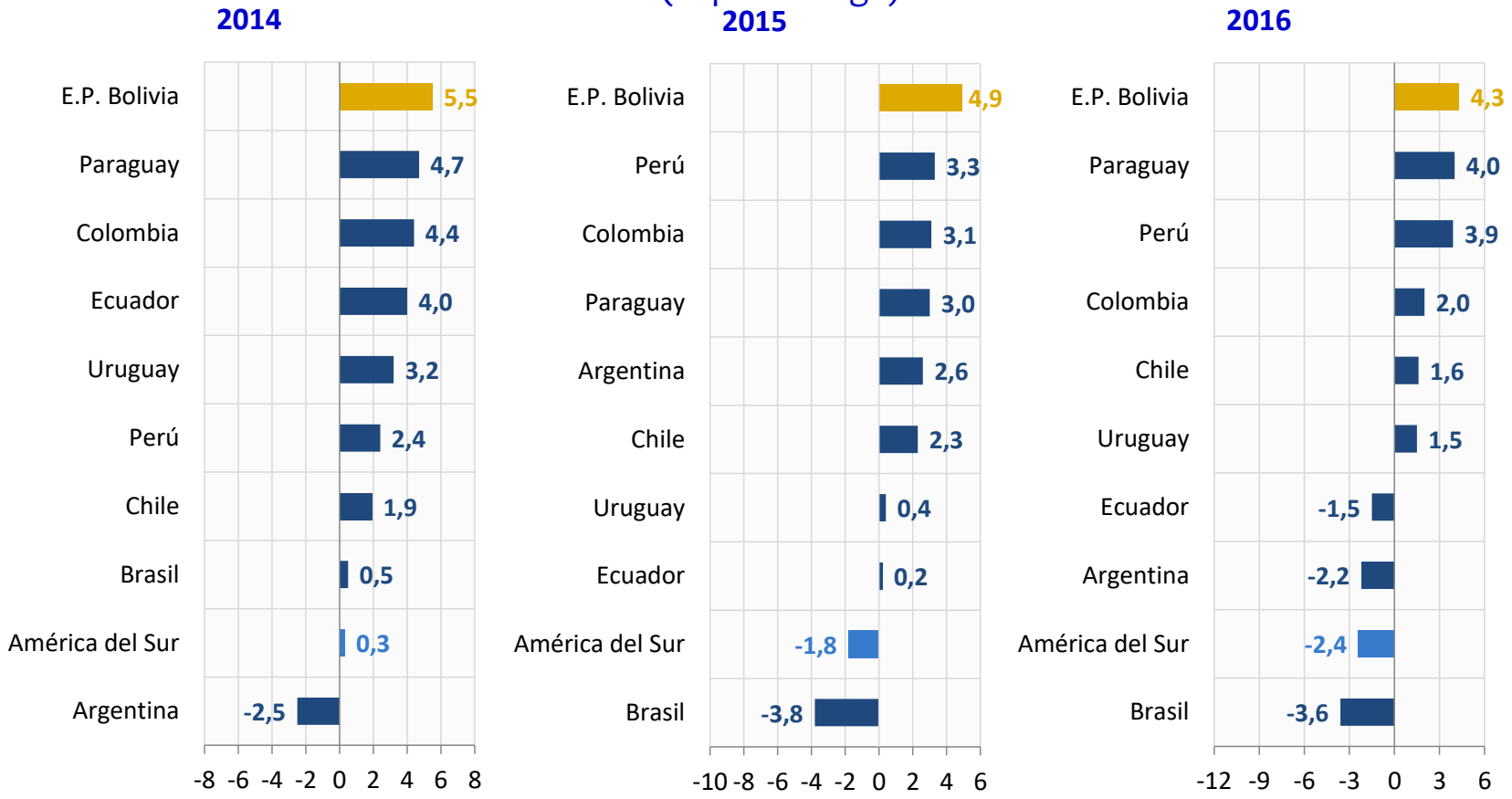
Goals achieved: Sustained Growth

Highest growth rate in the region for three consecutive years

The controlled inflation allowed the Central Bank to impulse the economic growth, achieving a sustained dynamism of the economy in Bolivia. At the end of 2016, the country reached the highest growth rate in South America for third consecutive year.

South America economic growth

(In percentage)



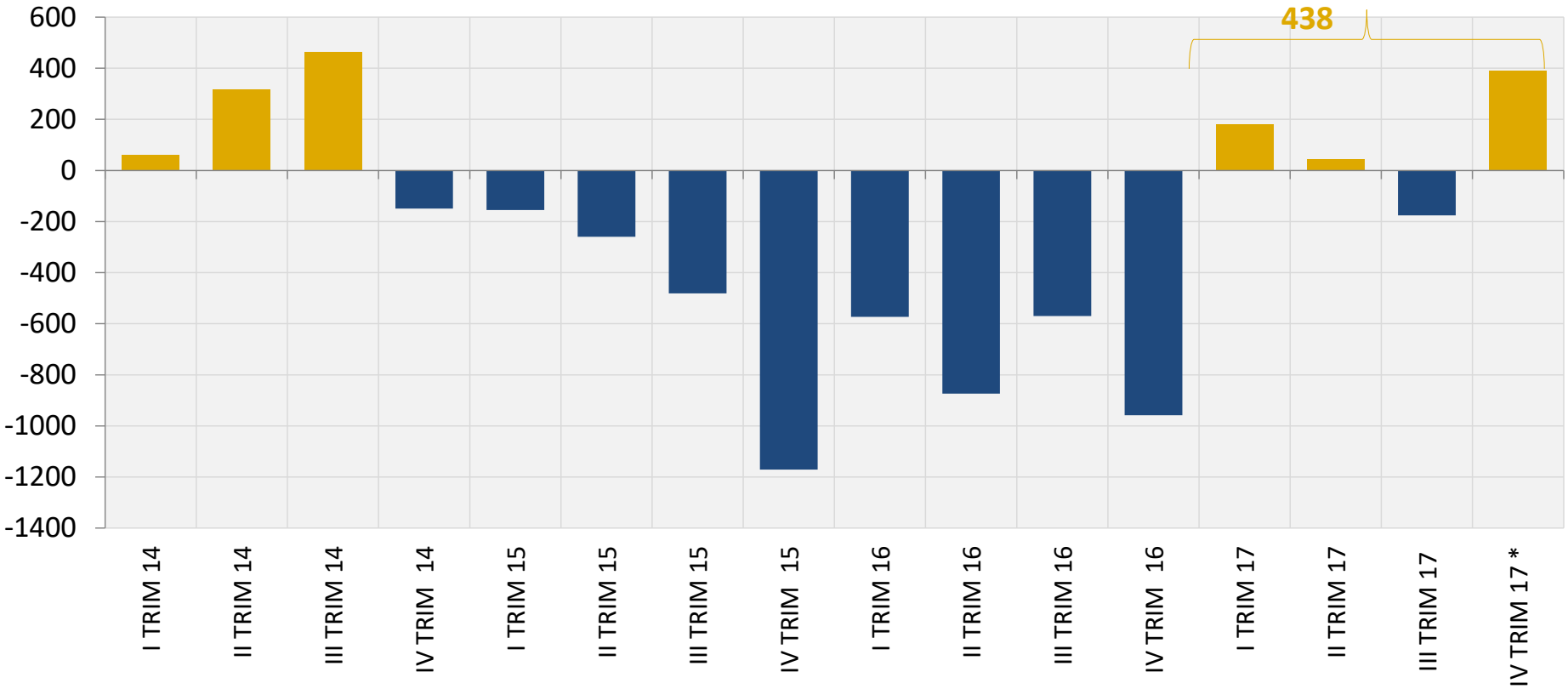
Source: Statistic Institutes and Central Banks.
Note: South America data corresponds to CEPAL.

Goals achieved: Even Stronger External Sector

The External Sector indicates recuperation indicators

Although expansive policies and stable exchange rate implied the Central Bank reserves, in 2017 these last ones stabilized.

Net International Reserves, quarterly flow
(In million of US dollars)



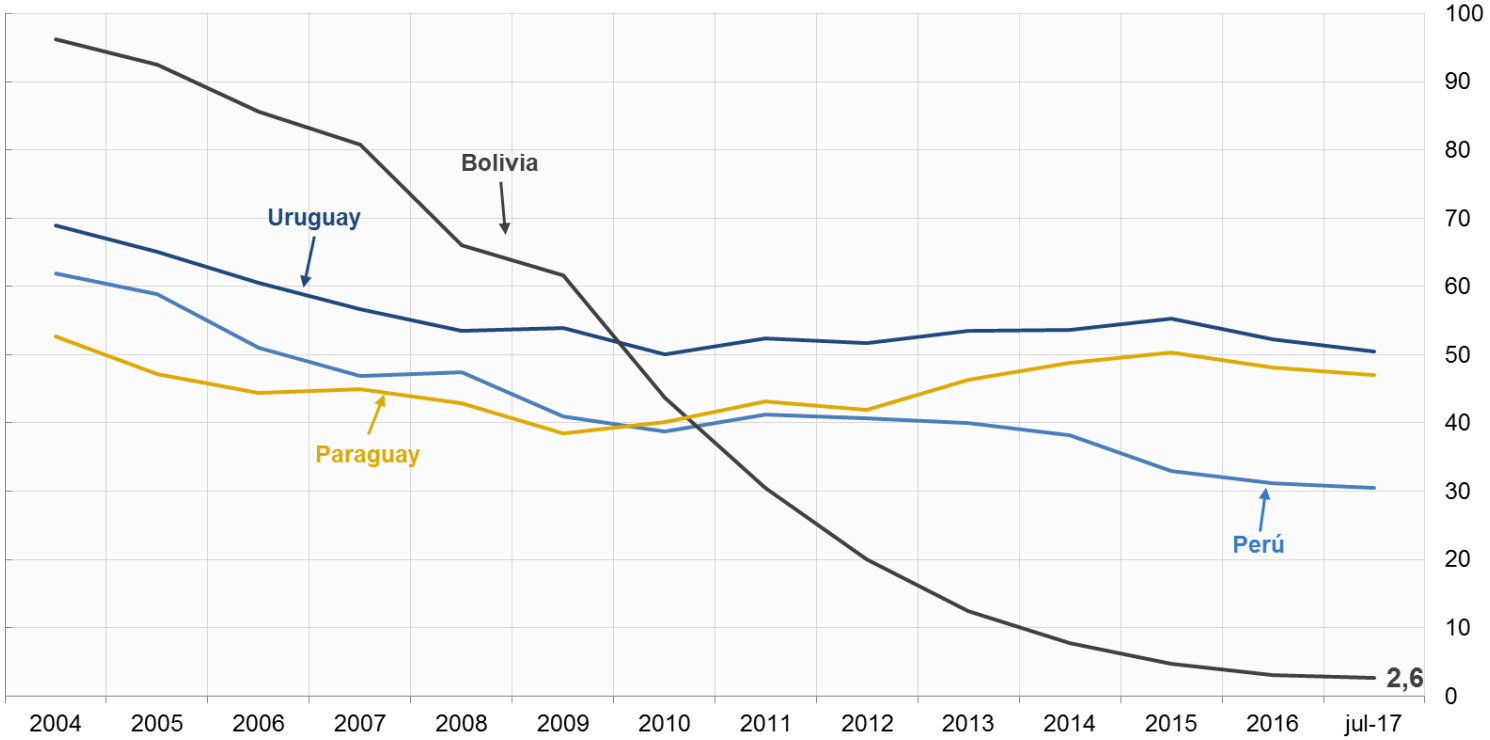
Source: Central Bank of Bolivia
Note: The data for the third quarter of 2017 corresponds to November, 15

Goals achieved: De-dolarization

Exchange rate policy and bolivianization

An special goal achieved by the nominal exchange rate stability was the deepening of the de-dollarization process (Bolivianization). The credits in local currency represent 97% of the total and savings represent 85%.

Credits dollarization
(In percentage respect the total)



Source: Central Bank of Bolivia – Finantial System Supervision Autority

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