# Typos for the 1st edition of "Brazilian Derivatives and Securities"

March 25, 2022

## Ackowledgements

Page xxi: **Mathias** Rosenbaum => **Mathieu** Rosenbaum

## 1.2.1 Testing the waters

Page 24: against the dollar **is** US Dollar per currency terms => against the dollar **in** US Dollar per currency terms

## 3.1 3 months in the life of an IR Swap

Page 65: would be around 12.40% **util** the next COPOM meeting. => would be around 12.40% **until** the next COPOM meeting.

## 3.8.1 DI Future (DI1) pricing

Page 80:

Equation 36:

$$FUT_{DI}(t,T) = \mathbb{E}^{\mathbb{Q}^{\mathrm{T}}_{\mathbb{CDI}}}\left[\frac{100,000}{\prod_{T_i=t}^{T}\left[1+CDI_{T_i}\right]^{\frac{1}{252}}} \cdot \frac{d\mathbb{Q}^*}{d\mathbb{Q}_{\mathbb{CDI}}{}^{T}}|_T|\mathcal{F}_{\mathrm{t}}\right]$$

=>

$$FUT_{DI}(t,T) = \mathbb{E}^{\mathbb{Q}^{\mathrm{T}}_{\mathbb{CDI}}}\left[\frac{100,000}{\prod_{T_i=t}^{T}\left[1+CDI_{T_i}\right]^{\frac{1}{252}}} \cdot \frac{d\mathbb{Q}^*}{d\mathbb{Q}_{\mathbb{CDI}}{}^{T}}|\mathcal{F}_{\mathrm{t}}\right]$$

## 4.2.2 Covariance

Page 95:

Equation 72:

$$\lambda_{1,2} = \left(\frac{\sigma_2^2+\sigma_1^2}{2}\right) \pm \sqrt{\left(\frac{\sigma_2^2-\sigma_1^2}{2}\right) + \sigma_{12}}$$

=>

$$\lambda_{1,2} = \left(\frac{\sigma_2^2+\sigma_1^2}{2}\right) \pm \sqrt{\left(\frac{\sigma_2^2-\sigma_1^2}{2}\right)^2 + \sigma_{12}^2}$$

Equation 74:

$$m_{1,2} = \left(\frac{\sigma_2^2-\sigma_1^2}{2\sigma_{12}}\right) \pm \sqrt{\left(\frac{\sigma_2^2-\sigma_1^2}{2\sigma_{12}}\right) + 1}$$

=>

$$m_{1,2} = \left(\frac{\sigma_2^2-\sigma_1^2}{2\sigma_{12}}\right) \pm \sqrt{\left(\frac{\sigma_2^2-\sigma_1^2}{2\sigma_{12}}\right)^2 + 1}$$

## 15.1 Government Inflation-Linked Bonds

Page 277:

Equation 504 (thanks to Andrey Gorbachev for catching it):

$$Price_t = 1,000 \cdot VNA_t \cdot \left( \sum_{T_i=1}^{N} \frac{\left[ (1+6\%)^{0.5} - 1 \right]}{(1+y)^{\tau_{t,T_i}^{252}}} + \frac{1}{(1+y)^{\tau_{t,T_N}^{252}}} \right)$$

=>

$$Price_t = VNA_t \cdot \left( \sum_{T_i=1}^{N} \frac{\left[ (1+6\%)^{0.5} - 1 \right]}{(1+y)^{\tau_{t,T_i}^{252}}} + \frac{1}{(1+y)^{\tau_{t,T_N}^{252}}} \right)$$

## 4.2.2 Covariance

## References

"**Interpolaçnao** por Cubic Spline **paraa** Estrutura a Termo Brasileira"=>"**Interpolação** por Cubic Spline **para a** Estrutura a Termo Brasileira"

**Cambio=>Câmbio**