

# Is there an expiration effect in the bitcoin market?

Nerea Satrústegui Moreno

3º año de Tesís Contacto: 576543@unizar.es

Programa de Doctorado en Contabilidad y Finanzas

DIRECTORES: María Natividad Blasco y Pilar Corredor

## MOTIVATION

- ✓ In December 2017, CME and CBOE started to **trade futures on bitcoin**.
- ✓ Underlying asset (Bitcoin) is **not traded in a formally regulated market**.
- ✓ It is an ideal opportunity to studied in more details the **behavior of cryptocurrencies**.

## METHODS

- ✓ We have studied **monthly expiration effect** on seven popular bitcoin exchanges: Itibit, Coinbase, Kraken, Binance, Bistamp, Bitfinex and Gemini.
- ✓ **Intraday data** constitute the base of our analysis whereas daily data are used for descriptive purposes and in robustness tests.
- ✓ We have run **576 models**, using 48 alternative cumulative hourly dummies, on 3 variables of analysis (volume, volatility and return), for 4 different references of expiration dates depending on the futures market studied (CME, CBOE and Bakkt separately and the joint effect).

## OBJECTIVES

Analyze whether bitcoin **trading volume, volatility and return** behave differently on the expiration date of bitcoin futures as compared to non-expiration times.

## MAIN RESULTS

Our results show that there is a **clear expiration effect related to bitcoin futures**. The closer to the expiration time (shortly beforehand or afterwards), the more intense these effects are.

The prevailing effect on **trading volume**: increases before the expiration date and decreases later.

The **volatility** pattern is similar, but more concentrated.

The effects on **returns** do not follow a common pattern.

## MAIN REFERENCES

- ✓ Corredor, P., Lechón, P., & Santamaria, R. (2001). Option-expiration effects in small markets: The Spanish stock exchange. *Journal of Futures Markets*, 21(10), 905–928.
- ✓ Batrinca, B., Hesse, C. W., & Treleaven, P. C. (2020). Expiration day effects on European trading volumes. *Empirical Economics*, 58, 1603–1638.

