

# Lecture 4 report

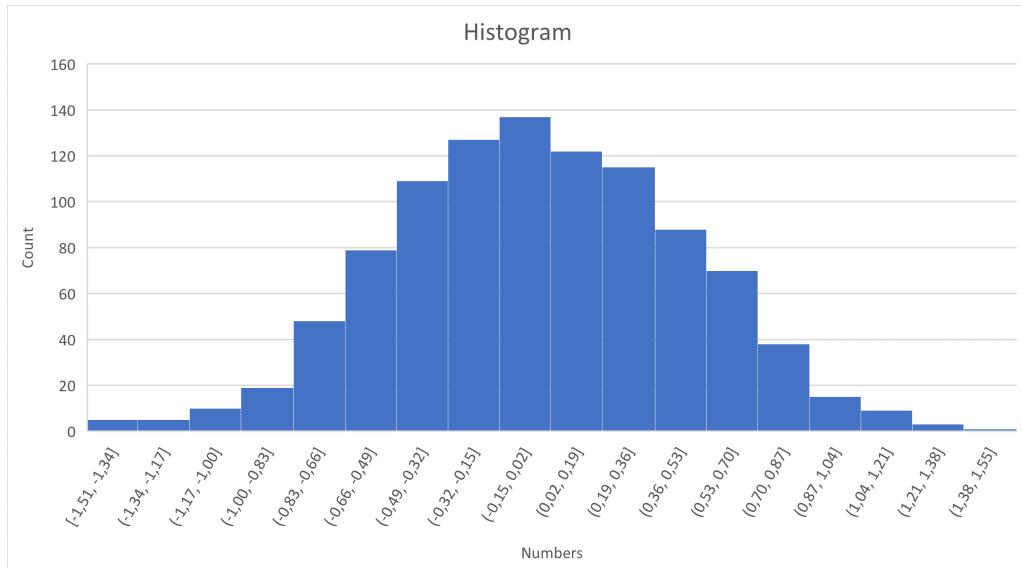
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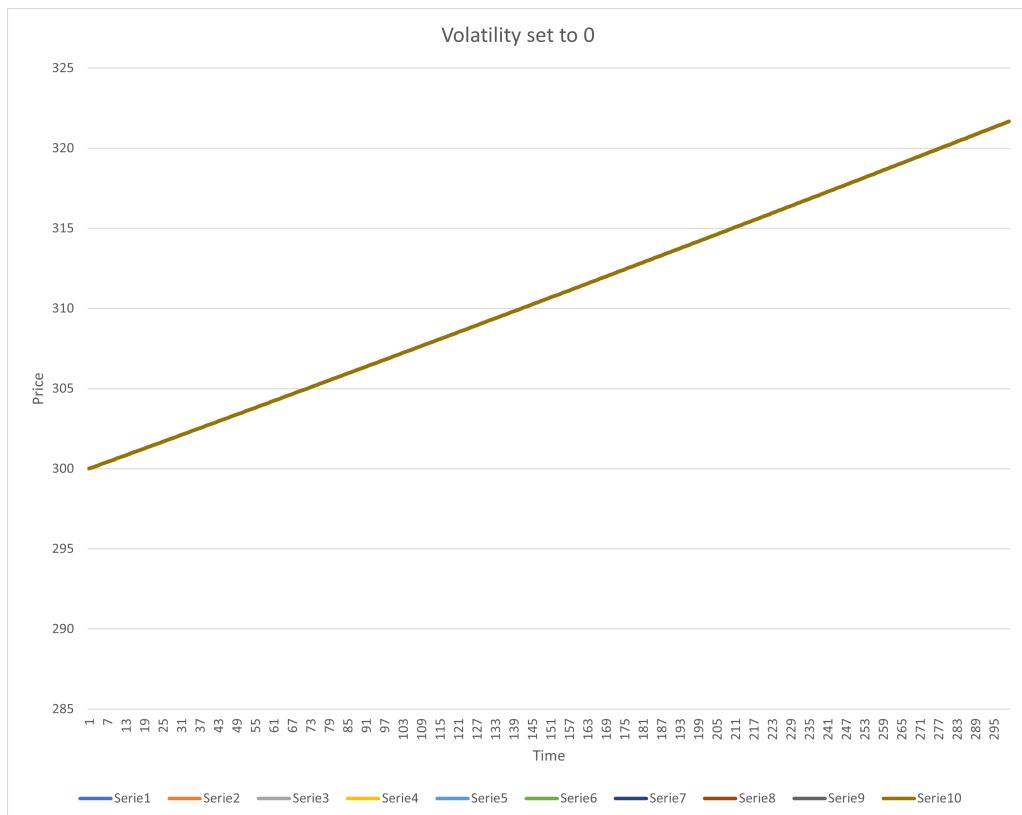
<b>zad1</b>	<b>2</b>
<b>zad2</b>	<b>2</b>
<b>zad3</b>	<b>3</b>

## zad1



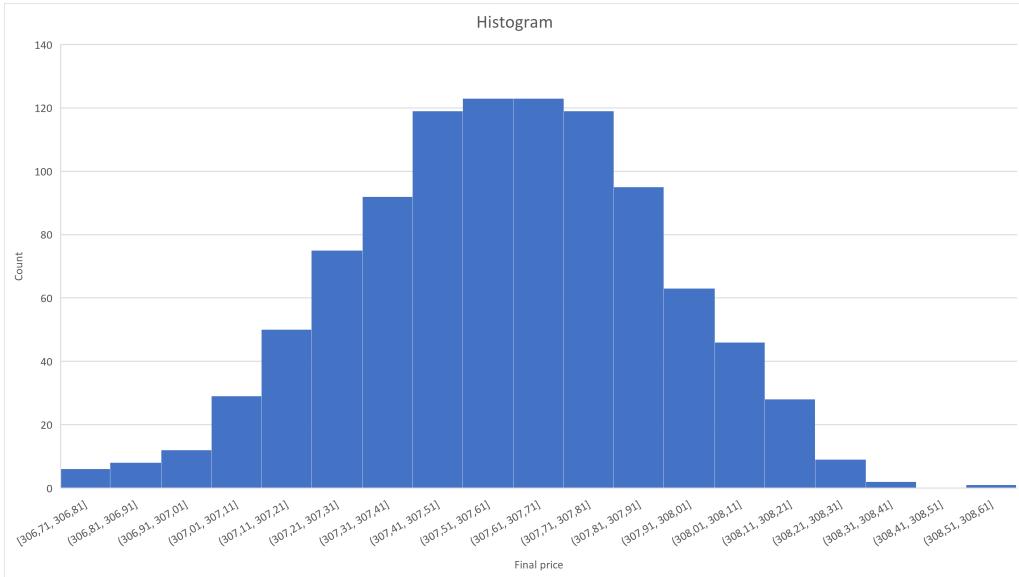
**Figure 1:** Box-Muller distribution check ( $\mu = 0, \sigma = 0.5$ )

## zad2



**Figure 2:** Volatility set to 0

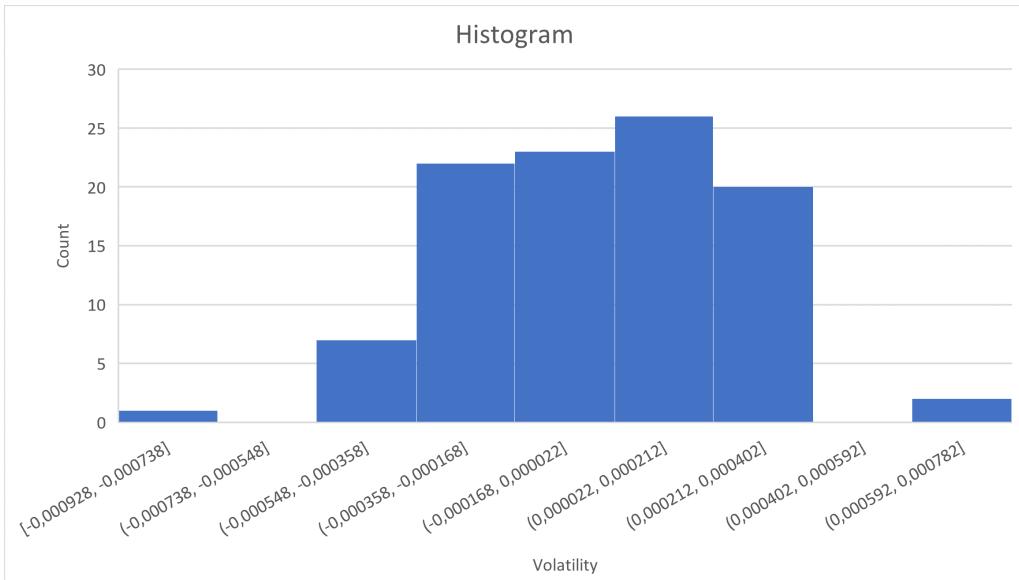
When volatility is set to 0, then the stock price is constant (with discounting in effect).



**Figure 3:** Histogram of 1000 final stock prices

Average historical volatility was smaller than input volatility (average  $\approx 0.001$ , input 0.03)

**zad3**



**Figure 4:** Histogram of historical volatility (AEX stock, 2021.05.03)