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SE-T-620-FJAX
Fjármál X

User Manual

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1 Bonds GUI

When opened the Graphic user interface bondGUI automatically starts by plotting the data points for the yield on the non-indexed bonds. To switch to indexed bonds click the indexed button, (*Section 2*), and then press the update button, (*section 1*). In addition to the yield curve there are three other rate curves that can be selected. The other options are Zero rate, forward rate and discount rate curve. To switch between these four rate curves, simply click on the box shown in (*section 3*) then press update. There are 8 different curve fitting methods to select from. To activate a method simply click at the empty box by the method you want to use, (*section 4*). In *section 5* in figure 1 you can see two sliders which control the degree of the polynomial and the smoothing factor of the cubic smoothing splines that go from 0% to 100%. Please note that the highest degree of polynomials is n-1, where n is number of data points. Also, note that 6th degree polynomial is the highest degree available. To clear out the fitting method that has been chosen simply press update.

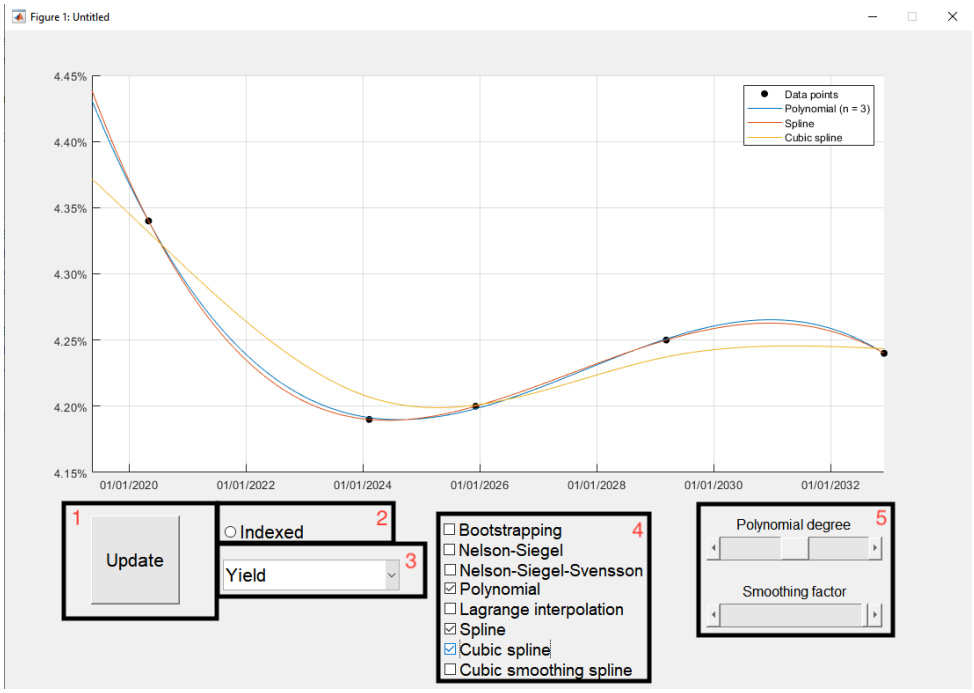

Figure 1.1: Bond GUI

2 Interest Rates GUI

The interestRateGUI displays the path of the interest rates. First you select which stochastic processes you want (*section 1*). There are three methods available *Simple*, *Brownian* and *Vasicek*. Then you can select properties for each simulation (*section 2*). *Maturity*, *Initial rate* and *Volatility*. If the Brownian method is selected please input the drift term value into the If the Vasicek method has been selected you will also need to add values to *Speed of reversion* and *Long term mean level*. To display or update the rate path simply click the *Update* button

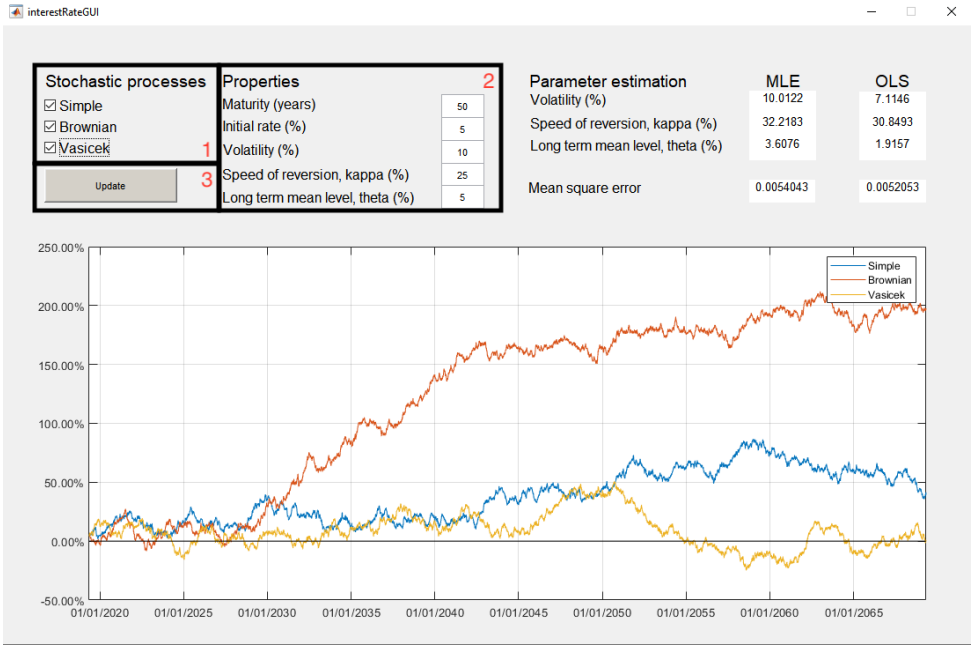

Figure 2.1: Interest Rates GUI

3 Swaps GUI

The swaps GUI is still a work in progress.

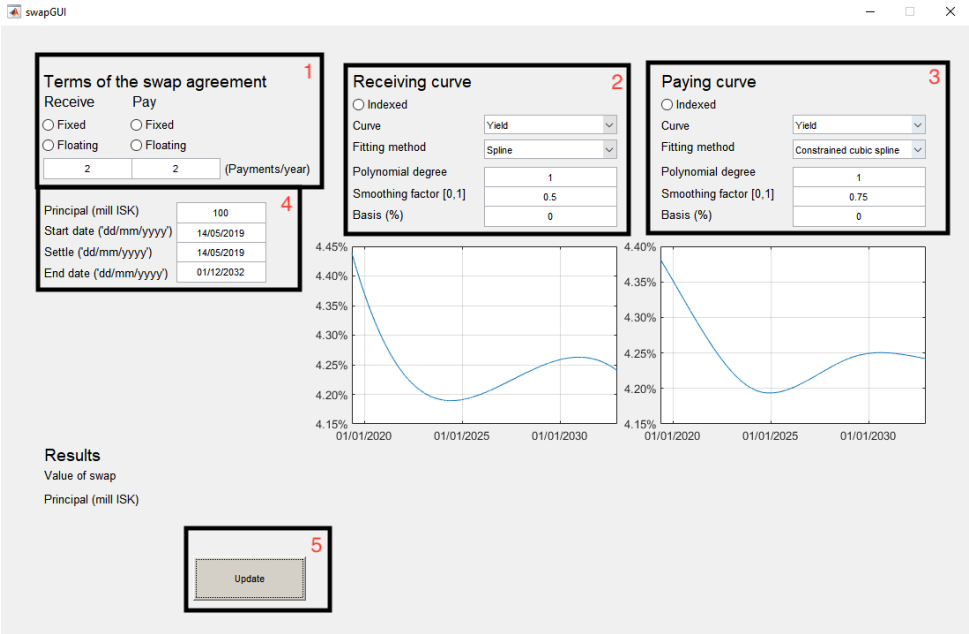

Figure 3.1: Swaps GUI

4 Option pricer GUI

The pricing model GUI calculates call, put, caps and floors prices for given terms. First select which stochastic model you want to use. For all model you will need to input values for *Initial rate*, *Step size*, *Volatility*, *Maturity* and *Number of simulations*. If *Brownian* is selected then add the drift term value to the *Long term mean* input box. If *Vasicek* is selected you will need to add values to the *Speed of reversion* and *Long term mean level* input boxes (*section1*). When *Interest rate properties* have been selected. Go to the *Option properties* and select values for *Maturity* and *Strike price* (*section 2*). At last, press the update button to get the results (*Section 3*).

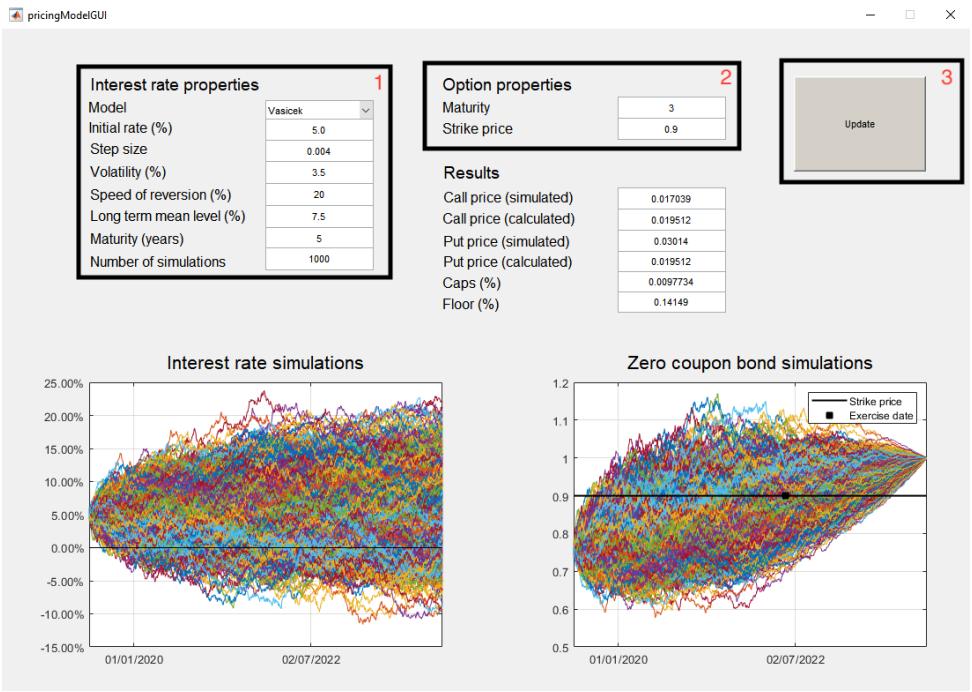

Figure 4.1: Pricer GUI

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