FINANCIAL ASSETS CORRELATIONS
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Q1: How do Mexican financial markets react to global shocks over the business cycle?

\[ M_t = \beta_0^{rec} (1 - D_t) + \beta_0^{exp} D_t + \beta_1^{rec} (1 - D_t) \text{SHOCK}_t + \beta_1^{exp} D_t \text{SHOCK}_t + \varepsilon_t \]  

(1)

\[ \Delta\%\text{EquityIndex}_t \quad \text{Expansion} = 1 \]
\[ 10Y-1Y\text{Spread}_t^{MX} \quad \text{Recession} = 0 \]
\[ \Delta\%\text{MXN/USD}_t \]

Equity and bond market: \(0 < \beta_1^{exp} < \beta_1^{rec}\)
Foreign exchange market: \(\beta_1^{exp} < 0, \beta_1^{rec} > 0\)

10Y yield\text{US}_t
10Y-1Y\text{Spread}_t^{US}
\Delta\%\text{WTI}

Q2: Based on this information, is it possible to determine the stage of the business cycle?

Re-estimate model 1, excluding data from 2018

\[ M_t = \gamma_0 + \gamma_1 \text{SHOCK}_t + \varepsilon_t \quad (t = 2018) \]

(2)

\[ H_0 : \gamma_1 = \beta_1^{rec} \quad vs \quad H_1 : \gamma_1 \neq \beta_1^{rec} \]
\[ H_0 : \gamma_1 = \beta_1^{exp} \quad vs \quad H_1 : \gamma_1 \neq \beta_1^{exp} \]

Only bond and forex market reaction to changes in 10Y-1Y\text{Spread}_t^{US} seem to have some forecasting power
SOME SUGGESTIONS

Question 1:
• Additional robustness test
  ➢ Definition of shocks
    What about changing the size of the rolling window?
    What about changing the width of the confidence bands?
  ➢ Sample period
    What happens if the global financial crisis is included?
• Explanation of the results
  What is behind the reaction of the Mexican financial variables? (Boyd et al., 2005)

Question 2:
• Consider exploring other methodologies
  ➢ Structural BVAR with sign and zero restrictions
    Identification of structural shocks can help to forecast the business cycle and give an economic interpretation to your results
THANK YOU FOR YOUR ATTENTION