

Quantitative Research

Fed's monetary policy: Our NLP model was accurate in forecasting the Fed's 5.25% terminal rate

- Our NLP model suggests that the Fed's hiking cycle came to an end with the 25bps rate hike announced today
- In addition, the model anticipated since June 2022 the 5.25% terminal rate, given that it classified the last 8 monetary policy statements with a terminal rate between 4.25% and 5.25%
- The model continues to ratify the consistency between the language used by the Fed in its monetary policy statements and the current restrictive cycle
- The model supports our view that the terminal rate will probably stand at 5.25% (upper bound) for an indefinite period

Fed's topics classification using NLP and ML techniques. In July 2022 we published a research note where we described a model using natural language processing (NLP) techniques that classify and interpret the FOMC statements. In addition, it also provided a methodology to confirm whether the communication made by the Central Bank is consistent with the monetary policy implemented (refer to: [Welcome to the Machine \(Learning\): An NLP framework for analyzing the Fed's monetary policy statements](#)).

The relationship between the Fed funds rate and the semantic classification obtained was also analyzed. In this regard, the most important finding in our research note was the degree of strength in the relationship between the Fed funds rate and the semantic classification obtained, given that the latter can explain 9 out of 10 rate movements. The model also defines the range of variation of the terminal reference rate (refer to Chart 2).

The model was accurate in estimating the terminal rate of 5.25% (upper bound). The model classified the last statement with the central topic that anticipates the terminal rate between 4.25% and 5.25% (refer to Chart 2). In addition, since June 2022, the model classified all the monetary policy statements with the same topic of today's press release. We also highlight that our model allowed us to anticipate, from the beginning of the restrictive cycle in the US (March 16, 2022), a terminal rate within the above-mentioned range (refer to Chart 1).

The model supports our view that the terminal rate will probably stand at 5.25% (upper bound) for an indefinite period of time. Looking ahead, the above-mentioned NLP framework will continue to allow us to identify any change in the Fed's terminal rate through the classification of the monetary policy announcements.

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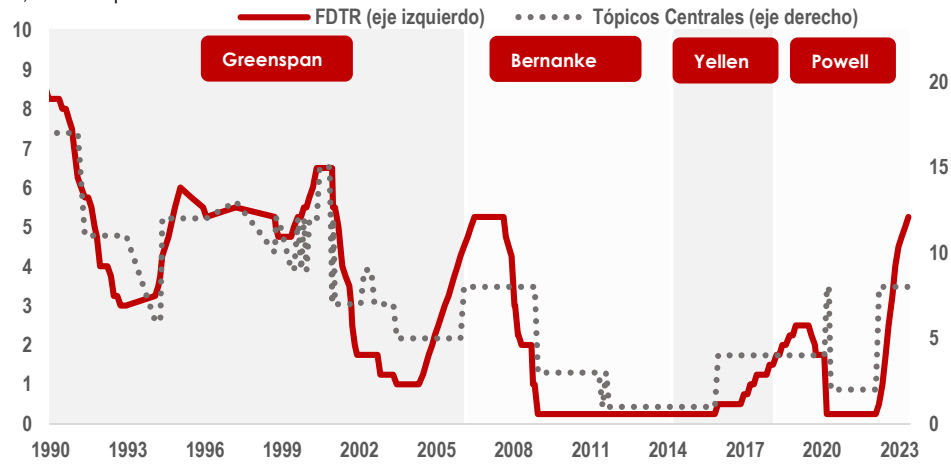
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Chart 1: Banorte's Fed Topic Index vs Fed Funds Rate (upper range)

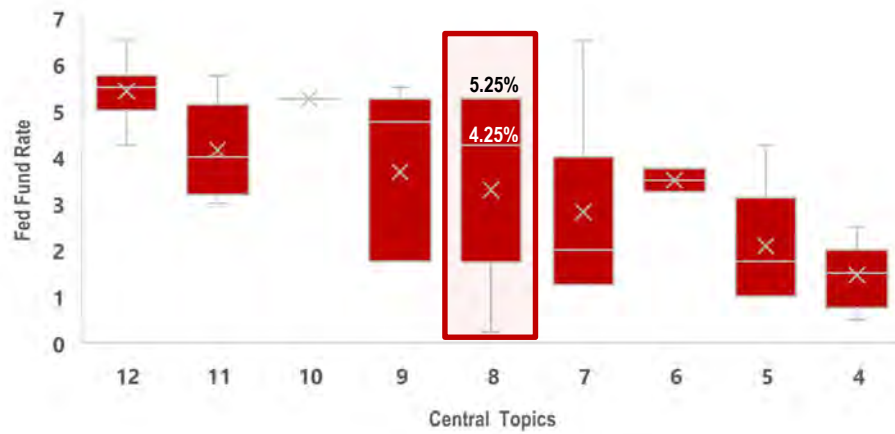
%; Central Topics



Source: Banorte, Federal Reserve, Bloomberg

Chart 2: Range of Fed Funds Rate by Topic

Central Topics



Source: Banorte, Federal Reserve, Bloomberg

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