Summary of *Let's face it: Quantifying the impact of nonverbal communication in FOMC press conferences*

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1. **What are the research questions?**
   - Are the market participants impacted by the nonverbal information during the FOMC press conferences?

2. **Why are the research questions interesting?**
   - The appreciation for central bank communication has increased dramatically in the past two decades.
   - Observed emotions may be taken as cues of deeper motives, and interpreted as additional information by market participants.

3. **What is the paper's contribution?**
   - The paper contributes to the literature on this channel by uncovering a new dimension of central bank communication
   - The paper is the first to study the impact of facial expressions in central bank communication and sets forth a new way of identifying and capturing soft information embedded in central bank communication

4. **What hypotheses are tested in the paper?**
   - H1: The market participants are impacted by information beyond that expressed verbally during the FOMC press conferences.
   - H2: Market participants observing Chair's negative facial expressions during the FOMC press conference may associate similar negative feelings with the discussed topic.

   a) **Do these hypotheses follow from and answer the research questions?**

   - Yes.

   b) **Do these hypotheses follow from theory? Explain logic of the hypotheses.**

   - Nonverbal communication plays a large role in all human interactions.Impressions about other people, as well as interpretations of what they say, are largely based on factors other than the verbal content. Facial expressions in particular play an important role in conveying nonverbal communication.

5. **Sample: comment on the appropriateness of the sample selection procedures.**

   - They use equity, implied volatility, and Euro to US Dollar exchange rate futures to measure the market reaction to the nonverbal component expressed during the press conference
   - They adopt an implementation of Microsoft Azure Cognitive Services Emotion API.

6. **Comment on the appropriateness of variable definition and measurement.**

   - The use of the PP method and singular value decomposition (SVD) for characterizing cross-stock linkages is innovative and allows for a parsimonious representation of complex relationships.
   - The measurement of asymmetric and symmetric components of cross-stock linkages provides a nuanced understanding of momentum strategies.

7. **Comment on the appropriateness of the regress/predict model specification.**

   - The paper employ a set of multivariate regressions that enable us to control for confounding effects.
   - Comments:the variable definitions and measurements in this study are appropriate and well-thought-out, reflecting a comprehensive approach to assessing the impact of non-verbal communication in the context of central bank communications.

8. **What difficulties arise in drawing inferences from the empirical work?**

   - While the study finds correlations between negative facial expressions and market reactions, interpreting these correlations as causal relationships can be tricky. Other confounding variables, not accounted for in the study, might be influencing both the Fed Chair's expressions and market movements

9. **Describe at least one publishable and feasible extension of this research.**

   - Examine the interaction between non-verbal communication (e.g., facial expressions in FOMC press conferences) and public sentiment (emotions extracted from social media, news reports), and how this interaction affects the response of financial markets.