

# Summarizing the Output of Workstream 2

## Could Meta-Analysis Be Useful?

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# What Is Meta-Analysis?

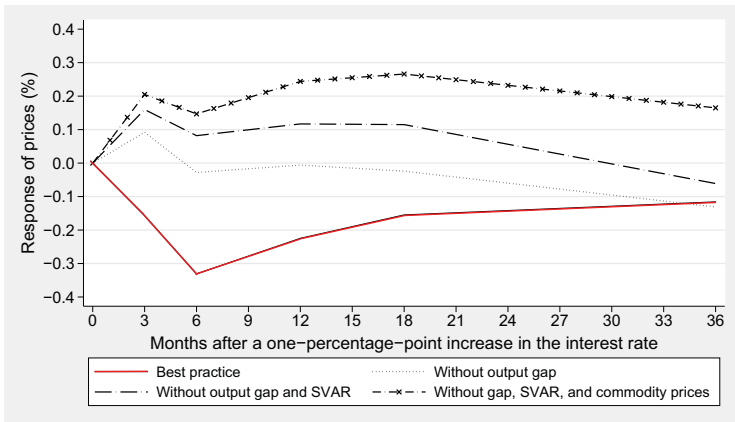
- Papers on the same topic report different results. Why exactly? What is the “true” result?
  - **Meta-analysis is the quantitative method of research synthesis.**
- Estimates the sources of heterogeneity and corrects for misspecifications.
- Developed in medicine (clinical trials). First economic meta-analysis in 1989 by Tom Stanley; now about 500 papers, including several in AER, JPE, and Econometrica.

# What We Need for a Quantitative Synthesis

- 1 A large number of studies.
- 2 Comparable summary statistics (ideally one number).
  - Potentially RMSE or type I/II errors?
  - We could examine the average performance and see what characteristics make a model perform better.
  - Problem: not enough papers reporting these statistics.

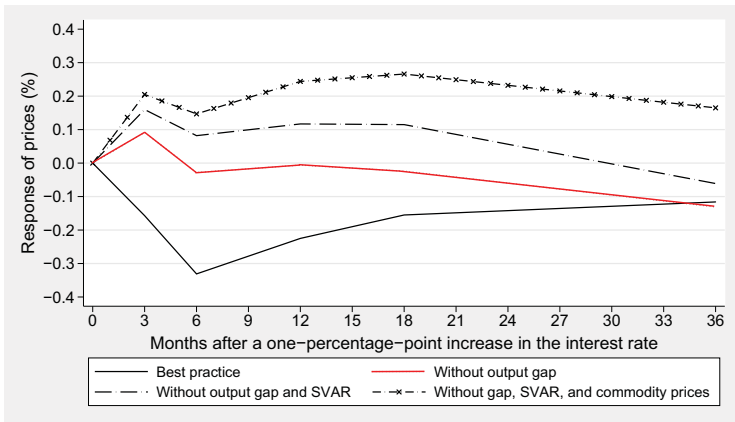
# An Example of a Non-Standard Meta-Analysis

## How to Solve the Price Puzzle? A Meta-Analysis (R&R JMCB)



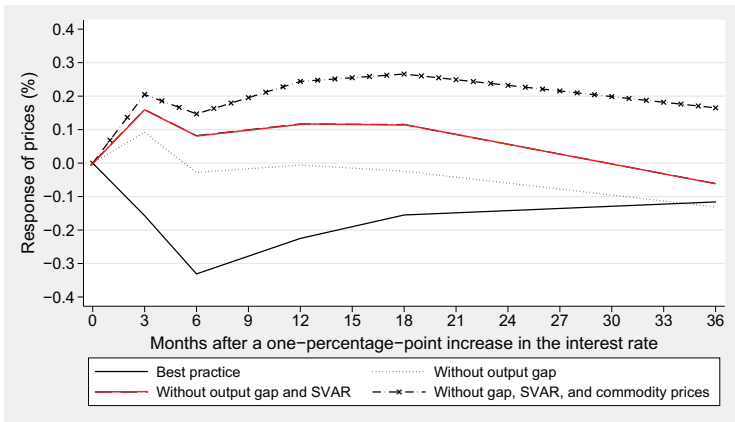
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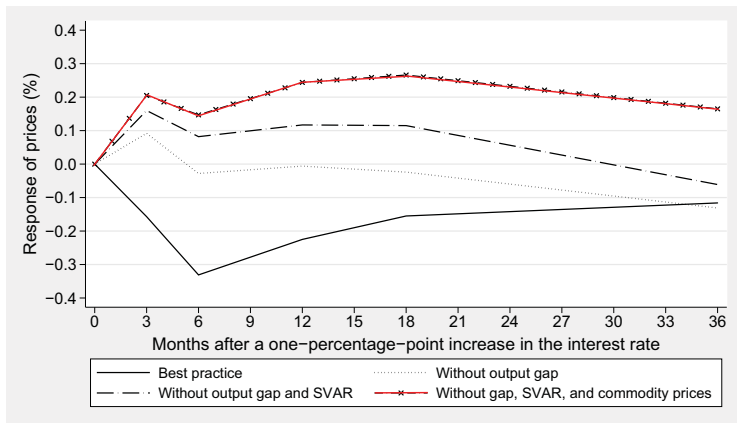
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## A Previous Meta-Analysis on EWS

- Frankel and Savarelos (2011) collected 83 papers estimating an EWS.
  - Computed which indicators were most often found significant.
- Especially reserves and real exchange rate.
- Further space for meta-analysis is limited (no comparable summary statistics).



## An Alternative: Bayesian Model Averaging

- Similar to the exercise of Frankel and Savarelos (2011), but with one primary data set.
- Many potential warning indicators. Not sure which should be included: **large model uncertainty**.
- BMA runs models with all possible combinations of indicators (millions of regressions).
- Identifies the most robust indicators.

## Summary

- 1 We lack comparable summary statistics  
→ meta-analysis not suitable for EWS.
- 2 Bayesian model averaging is analogous to meta-analysis  
in some aspects . . .
- 3 . . . but is no substitute for a proper narrative survey.

# Recent Literature on Meta-Analysis

-  Borenstein, M., L. V. Hedges, J. P. T. Higgins & H. R. Rothstein (2009): Introduction to Meta-Analysis. Wiley, 1st. edition.
-  Card, D., J. Kluve, & A. Weber (2010): Active Labour Market Policy Evaluations: A Meta-Analysis. *The Economic Journal* **120(548)**: pp. F452–F477.
-  Havranek, T. & Z. Irsova (2011): Estimating Vertical Spillovers from FDI: Why Results Vary. *Journal of International Economics* **85(2)**: pp. 234–24.

Reading list on RePEc: [ideas.repec.org/k/metaana.html](http://ideas.repec.org/k/metaana.html)