jefferythewind:

to make directed acyclic graphs of our models?

Do we think it would actually help? Why?

Has anyone tried causality

This is an interesting post. Thank you for sharing. However, for the sake of prediction, I believe association may be enough. You would only be interested in casual impacts if, like you mentioned, you are mainly concerned of the effect on Y if some actor made some change to X. For example, the Federal Reserve would be interested in what happens to CPI and GDP for each unit increase in the Fed Funds rate. In the Rebonato links, he seems concerned about portfolio returns (Y) to some macroeconomic shock (X). A simpler framework to think through may be something found here: Monetary Policy Surprises, Credit Costs, and Economic Activity - American Economic Association

A second point is that even if you are able to model most dynamics using a directed acyclic graph, the main issue is usually a lack of data for confounding variables Z. In that, for example, it would be onerous to collect data on Z or the nature of Z is too subjective (although relevant) to be quantifiable.

Ideally, if you would like to build a causal model for whatever reason, you would need what is considerd “exogenous variation” in your X variables. The paradigm linear example would be an instrumental variable approach. You can also think of random sampling for an A/B test as an instrumental variable that 100% correlates with treatment. However, I have never tested this, but I believe once you identified the exogenous variation, you can just treat it like any other variation that you use in your models.

That is at least how I understand it. Please let me hear your thoughts if different. Thanks.