Teaching Macro Principles *after* the Financial Crisis

by

Alan S. Blinder, Princeton University

CEPS Working Paper No. 207
April 2010

Acknowledgements: This paper was prepared for the *Journal of Economic Education*. It is based on an oral presentation at the annual meetings of the American Economic Association in January 2010. I am grateful to David Colander for helping to turn the transcript of that presentation into a written paper. I am also grateful to Princeton's Center for Economic Policy Studies for research support.

Teaching Macro Principles *after* the Financial Crisis

The stunning events of 2007-2009 both shook the world and piqued interest in economics. In the 30-plus years that I have been teaching macro principles, I have never seen the level of interest in students as high as what I observed last year—rapt attention and no sleepers! Interest in economics has grown, and our students will want, expect, and deserve explanations of these events for years to come. This is truly a teaching moment, and that "moment" is going to be a long one. That's the good news. The bad news is that the current curriculum fails to give students even imperfect answers. This means that the macro principles course will have to be changed. Although we can't provide beginning students with complete answers, we can do a lot better than we have been doing.

My perspective in this paper is that of a textbook author and teacher of macro principles. The students in such courses are typically young, new to economics, unfamiliar with financial markets, and not well-equipped technically. This means, among other things, that we must simplify enormously, while keeping in mind Einstein's famous dictum: "Everything should be made as simple as possible, but not simpler." Today's textbooks and course syllabi were developed over decades that never witnessed anything remotely close to the events of 2007-2009. So many of the basic pedagogical decisions made over the years—either tacitly or explicitly—need to be reconsidered. I start the paper with four such decisions, and then consider a list of seven new topics that one might want to add to a macro principles course. To give away part of the punch line at the outset, seven is too many. We must choose.

Four Basic Pedagogical Decisions

My first major pedagogical choice is the *relative* degree of emphasis on growth versus business cycles. Of course, we need to cover both aspects of macro dynamics. But both textbook writers and teachers must decide how much time and effort to devote to each. I've been writing "Baumol and Blinder" for more than 30 years now,[1] and I have seen this choice run in fads. Prior to the 1980s, principles (and intermediate) texts focused strongly on business cycles. Indeed, macroeconomics was primarily the study of business cycles—except at the graduate level. History, of course, suggests such an emphasis. Booms and busts, it turns out, swing elections and transform societies. When students came to learn macroeconomics, this is what they wanted to hear about.

Then, as the long boom of the 1980s progressed, fashions changed, and textbooks started to give more emphasis to long-run growth. This fad continued into the 1990s, as a brief and

[1] William J. Baumol and Alan S. Blinder, *Economics: Principles and Policy*, 11th Edition (Cengage: 2009). The first edition was published in 1979, and the publisher's name has changed many times due to mergers, acquisitions, etc.

mild recession early in the decade was followed by the longest expansion in U.S. history, which finally ended with what I call the "recessionette"—a recession so mild that it disappears in annual data. So growth became the rage and cycles were submerged.

The financial crisis and the ensuing mega-recession will predictably cause textbook writers and teachers to rethink that focus. Students will demand it, as will reality. I suspect we are now in the early stages of what will be a long-lasting and major "taste" change—back toward more emphasis on business cycles. That is certainly what I think we should do.

A second, and related, decision that both textbook authors and instructors must make is how "Keynesian" to make their books/courses. This choice involves, e.g., whether to teach the Keynesian multiplier model, how much prominence to give to the consumption function, and so on. Books have changed considerably in their answers to such questions over the years. Indeed, some texts pretty much reject Keynesian analysis. I think it is pretty hard to explain most governments' responses to the crisis and recession without a healthy dose of Keynes.

A third decision that textbook authors really must rethink is the "one-interest-rate" model. Almost all macro models are one-interest-rate models—not only in principles courses, but also in upper level courses. Indeed, I think it is fair to say that one-interest- rate models dominate macro teaching right through the graduate level. Economists, of course, have always known that reality involves many interest rates. There are huge scholarly literatures, for example, on term premiums and risk premiums. But when faced with the simplicity/complexity tradeoff, most of us decided that multiple interest rates were just not worth the complexity they added to the story we were telling. (Remember Einstein!) After all, we told students who asked, while there are many different interest rates, they all tend to rise and fall together.

I believe that assessment, which served us well for decades, has outlived its usefulness. Given what has transpired over the last few years, what in the world can possibly be meant by "*the* interest rate"? How can we explain events—events that were central to the financial crisis—in which Treasury yields fell while almost all other interest rates rose? In short, how can we continue to teach the one-interest-rate model?

My fourth and final major pedagogical decision is how complex the model must be, especially in the financial domain, in order to convey the appropriate story to our students. Complexity in the financial sector is almost completely absent from principles (and other macro) texts—left, I suppose, to more advanced courses in money and banking or finance. Keeping in mind the Einstein quotation mentioned earlier, this is one place where, in retrospect, we clearly erred on the side of excessive simplicity. To the extent that these texts

have a "financial sector" at all,[2] it is far too simple to convey even the essence of what happened—never mind the details. But once you start traveling down the complexity road in finance, where do you stop? Remember, these are principles students who may not even know how a bank account works!

As I prepare the next edition of Baumol and Blinder, I am struggling with how to answer each of these four questions, but especially the last. Fortunately, in my view, our book has always given cycles far more attention than growth, and it has maintained a Keynesian flavor for short-run (cyclical) analysis. I am quite comfortable with these decisions right now. But the one-interest-rate assumption has clearly lost touch with reality, and I am going to have to add some more material on finance. However, in adding such topics, I want to make sure that what I add is essential.

Some might ask: Why not just add everything you need to explain recent events? After all, each professor can choose what to include and what to exclude in his or her own course. But that is not satisfactory for at least three reasons. The first is that, if something interesting appears in the text, there will be pressure on professors to use it—after all, students will see it there. The second reason is that textbook authors are supposed to provide guidance on what they think is important enough to consider teaching. But the third, most important, reason is that the principles course is already crammed with too much material. We economists, above all, should understand budget constraints, the necessity of choice, and the need to weigh costs (of inclusion) against benefits. Including "everything" is just not an option, even if we knew what it meant.

New Topics for Macro Principles

In practice, every instructor must decide what new materials to add to his or her course—and what to delete, for the semester (or quarter) has not grown any longer. In this section of the paper, I discuss seven specific candidates for inclusion—all related to the financial crisis. But the problem is this: The full list is almost certainly too long. So I share my current thinking on what to include/exclude below.

Risk Premiums in Interest Rates

As discussed above, all standard macro models have a single interest rate. In light of the recent financial crisis, this assumption simply won't do any more. To tell the story of the recent crisis, it is surely necessary to have multiple interest rates. Our former excuse for pretending that there is only one interest rate—that all rates go up and down together—has been demonstrated to be false. To cite just one example, we just came through a period in which rates on mortgage-backed securities (MBS) soared while T-bill rates went to zero. So

[2] Often, there is nothing more than demand and supply functions for money.

I don't think we can give that answer with a straight face any more—especially to principles students. (Graduate students will accept anything, as long as you tell them it is an assumption!)

The dimension of interest rates that I believe must be included involves an explicit understanding of how risk affects rates. It is not difficult to teach beginning students that every interest rate involves two components: the riskless (e.g., Treasury) rate plus a premium to cover the risk of default. Nor is it difficult to convey to students that higher likelihoods of default lead to higher risk premiums. But how much deeper to get into risk premiums is unclear. Explaining to students what determines the size of the risk premium is difficult, in part because we economists don't have good explanations ourselves. The issue clearly involves the rational part: expected loss rates. But it also involves the potentially irrational part: bubbles and financial panics. That, for example, is where the animal spirits that Robert Shiller discusses in his paper in this symposium come in. At the level of the principles course, I am strongly inclined to leave risk premiums "exogenous"—that is, to include them, but not to get into detailed explanations of how they are determined.

Asset-Market Bubbles

Currently, there is not much in the Baumol-Blinder textbook about bubbles. But, when teaching the course to Princeton students, I've often given a lecture on stock market bubbles. I found last year that this lecture is quite easy to adapt to housing bubbles. After all, the fundamentals of stock market valuation (dividends, expected growth rates, and discount rates) have precise analogs in the fundamentals of housing valuations (rental rates, expected growth rates, and discount rates). It seems pretty clear now that house prices went way beyond fundamentals before the crisis, and that the house price bubble subsequently burst. That discussion is relatively easy to get across to beginners; it can be included in the principles course without much problem.

The hard part is what, if anything, to say about what I call the "fixed income bubble," which manifested itself (although the markets were saying no) in irrationally small risk premiums on almost every kind of debt. Interest rates that were "too low" meant, of course, that the corresponding bond prices were "too high," although we didn't know that for sure until the bubble burst. I think this part of the story is much harder to tell; and it gets harder and harder the more you cling to rational expectations. As some personal evidence for that, I can tell you that my many presentations on excessively small risk premiums, given to myriad audiences of financial-market participants from 2003 to 2006, had exactly zero effect on those premiums.

Securitization

The securitization of mortgages, credit card debt, student loans, and many other forms of debt has always seemed like an excessive level of detail for a principles course. It is more than I want to teach or have the time to teach. But it is clearly part of the story of the financial crisis. So the question we have to ask ourselves now is whether we can tell the story without it. My current answer is: yes and no. By yes, I mean that we must at least discuss mortgage-backed securities (MBS), since they accounted for so much of the contagion of the problems in housing to a broader swath of the financial markets. By no, I mean that we can probably skip any broader discussion of securitization in the interest of simplicity. In fact, I would love to think of a way to get rid of MBS in the explanation. But I fear that it is not a detail, but rather a central part of the story.

Leverage

Leverage is both central to the crisis and a good general lesson that is easy to teach. So I think the coverage of leverage should and will increase significantly. Speaking personally, there is no discussion of leverage at all in the 11th Edition of our text, but there will be one in the next edition—displayed prominently.[3] You really cannot explain what happened in the financial crisis without getting into leverage, and how it magnifies returns on both the upside and the downside. The good news about adding leverage as a topic is (a) that it is a valuable general lesson—something you'd like your students to know anyway, and (b) that it is quite easy to teach with numerical examples—you don't need any formulas. In fact, I would argue that formulas inhibit rather than enhance understanding at this level.

Insolvency and Illiquidity

A much harder concept that played a role in the crisis is the difference between insolvency, which means having negative net worth, and illiquidity, which means having too many assets that cannot easily be converted to cash. The distinction is important to how the crisis developed; but the issues here are subtle, perhaps too subtle for students taking the principles course. The problem is that while these two concepts are quite distinct conceptually, they blend together in practice. Indeed, we have seen how illiquidity can slide into and become (cause?) insolvency. So the distinction may be much less stark in practice than in theory. When a firm (or a household, for that matter) is illiquid, it can end up being forced into fire sales of assets, selling whatever it can at whatever price it can get. Such fire sales, in turn, can wreak havoc with supposed fundamental values and lead to insolvency. So here is one case where it may be appropriate to err on the side of simplicity and not cover illiquidity in the principles course. But an argument can certainly be made on the other side.

Systemic Risk and Too Big To Fail

[3] The 11th Edition Update will be published shortly, with an entirely new chapter on the crisis. Leverage is taught in that chapter.

To my knowledge, neither of these topics is currently treated in most principles courses, although they do get treated later, especially in finance courses. Indeed, the whole focus on *financial* stability—what Raghuram Rajan, in his discussion in this symposium, called the underlying plumbing of the system—is pretty much absent from current texts. Instead, almost all the focus is on *macroeconomic* stability (reducing the variance of output and inflation). That is something that is going to have to change. We need more discussion of the nature and importance of financial stability, how it can be achieved, and what happens when it evaporates.

Once you include financial stability as, say, one of the goals of the central bank, systemic risk becomes a natural part of that discussion. Similarly, discussing systemic risk leads directly into "too big to fail" (TBTF) and its first cousin, "too interconnected to fail" (TITF)—the latter being the underlying rationale for saving firms such as Bear Stearns (and LTCM a decade earlier). Unfortunately, this is another topic that gets very deep very quickly, so it is tempting to try to teach around it. But can we? Issues surrounding TBTF and TITF are going to be central to the debate over financial reform and thus need to be discussed at least a bit. At least that is my current plan for the 12th Edition of Baumol and Blinder.

Moral Hazard

Any discussion of too big and too interconnected to fail will lead directly to a traditional micro subject: moral hazard. This is yet another topic that I think needs more attention in macro, even at the principles level. It will, as just noted, be a natural follow-up to any discussions of systemic risk and the government's attempt to create a safety net under the financial plumbing. Fortunately, it can be taught in a reasonably simple way through examples.

Conclusion

We really do need to change the textbook macro model—in principles and at higher levels as well. The model we have been teaching turns out to have been too simple, and it is going to have to be made a bit more complex. Part of the art of textbook writing is to add additional complexities without performing root and branch surgery, that is, to embed the necessary changes by trimming and planting around the edges of the basic textbook framework. Apart from the single-interest-rate assumption, that basic framework, in my view, remains solid, contrary to some of the views that Robert Shiller mentions in his paper in this symposium. I believe that, once the current framework is supplemented by some of the topics discussed above, it will provide a solid pedagogical approach to thinking about both what went wrong and the fiscal and monetary palliatives that were applied by governments. The trick, as Einstein appreciated, will be to find the *minimal* degree of additional complexity needed to provide students with the understanding they need and deserve.