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Ben Bernanke an "Expert" on the Great Depression??

A link to my [blog](#) from a US legal advisory website the [Practising Law Institute's In Brief](#) ("[Deflation in the Real World](#)") reminded me of Bernanke's book [Essays on the Great Depression](#), which I've been aware of for some time, but have yet to read. I'll make amends on that front early this year; fortunately, an extract from Chapter One is available as a [preview](#) on the Princeton site (I couldn't locate the promised eBook anywhere!; in what follows, when I quote Bernanke it is from the original journal paper published in 1995,¹ rather than this chapter).

To put it mildly, Bernanke's analysis is not promising.

The most glaring problem on first glance is that, despite Bernanke's claim in Chapter One ("[The Macroeconomics of the Great Depression: A Comparative Approach](#)") that he will survey "our current understanding of the Great Depression", there is only a brief, twisted reference to Irving Fisher's [Debt Deflation Theory of Great Depressions](#), and no discussion at all of Hyman Minsky's contemporary [Financial Instability Hypothesis](#). (like most neoclassical economists, he seems unaware that there are other schools of economic thought apart from the neoclassical).

While he does discuss Fisher's theory, he provides only a parody of it—in which he nonetheless notes that Fisher's policy advice was influential:

"Fisher envisioned a dynamic process in which falling asset and commodity prices created pressure on nominal debtors, forcing them into distress sales of assets, which in turn led to further price declines and financial difficulties. His diagnosis led him to urge President Roosevelt to subordinate exchange-rate considerations to the need for reflation, advice that (ultimately) FDR followed.

He then readily dismisses Fisher's theory, for reasons that are very instructive:

Fisher's idea was less influential in academic circles, though, *because of the counterargument that debt-deflation represented no more than a redistribution from one group (debtors) to another (creditors)*. Absent implausibly large differences in marginal spending propensities among the groups, it was suggested, pure redistributions should have no significant macroeconomic effects. " (Bernanke 1995, p. 17; emphasis added).

This is an example of the old (and very apt!) joke that an economist is someone who, having heard that something works in practice, then ripostes "Ah! But does it work in theory?".

It is also—I'm sorry, there's just no other word for it—mind-numbingly stupid. A debt-deflation transfers income from debtors to creditors? From, um, people who default on their mortgages to the people who own the mortgage-backed securities, or the banks?

Well then, put your hands up, all those creditors who are now substantially better off courtesy of our

¹ *Journal of Money Credit and Banking*, February 1995, v. 27, iss. 1, pp. 1-28.

contemporary debt-deflation...

What??? No-one? But surely you can see that *in theory*...

The only way that I can make sense of this nonsense is that neoclassical economists assume that an increase in debt means a transfer of income from debtors to creditors (equal to the servicing cost of the debt), and that this has no effect on the economy apart from redistributing income from debtors to creditors. So rising debt is not a problem.

Similarly, a debt-deflation then means that current nominal incomes fall, relative to accumulated debt that remains constant. This increases the real value of interest payments on the debt, so that a debt-deflation also causes a transfer from debtors to creditors—though this time in real (inflation-adjusted) terms.

Do I have to spell out the problem here? Only to neoclassical economists, I expect: during a debt-deflation, debtors don't pay the interest on the debt—they go bankrupt. So debtors lose their assets to the creditors, and the creditors get less—losing both their interest payments and large slabs of their principal, and getting no or drastically devalued assets in return. Nobody feels better off during a debt-deflation (apart from those who have accumulated lots of cash beforehand). Both debtors and creditors feel and are poorer, and the problem of non-payment of interest and non-repayment of principal often makes creditors comparatively worse off than debtors (just ask any of Bernie Madoff's ex-clients).

Having dismissed—and barely even comprehended—the best contemporary explanation of the Great Depression, Bernanke is now trapped repeating history. It is painfully obvious that the real cause of this current financial crisis was the excessive build-up of debt during preceding speculative manias dating back to the mid-1980s. The real danger now is that, on top of this debt mountain, we are starting to experience the slippery slope of falling prices.

In other words, the cause of our current financial crisis is debt combined with deflation—precisely the forces that Irving Fisher described as the causes of the Great Depression back in 1933.

Fisher was in some senses a predecessor of Bernanke: though he was never on the Federal Reserve, he was America's most renowned academic economist during the early 20th century. He ruined his reputation for aeons to come by also being a newspaper pundit and cheerleader for the Roaring Twenties stock market boom (and he ruined his fortune by putting his money where his mouth was and taking out huge margin loan positions on the back of the considerable wealth he earned from inventing the Rolodex).

Chastened and effectively bankrupted, he turned his mind to working out what on earth had gone wrong, and after about three years he came up with the best explanation of how Depressions occur (prior to Minsky's brilliant blending of Marx, Keynes, Fisher and Schumpeter in his Financial Instability Hypothesis [here's another [link](#) to this freely accessible paper by Minsky]). In his *Econometrica* paper, Fisher argued that the process that leads to a Depression is the following:

- 1) Debt liquidation leads to distress selling and to
- (2) Contraction of deposit currency, as bank loans are paid off, and to a slowing down of velocity of circulation. This contraction of deposits and of their velocity, precipitated by distress selling, causes

- (3) A fall in the level of prices, in other words, a swelling of the dollar. Assuming, as above stated, that this fall of prices is not interfered with by reflation or otherwise, there must be
- (4) A still greater fall in the net worths of business, precipitating bankruptcies and
- (5) A like fall in profits, which in a "capitalistic," that is, a private-profit society, leads the concerns which are running at a loss to make
- (6) A reduction in output, in trade and in employment of labor. These losses, bankruptcies, and unemployment, lead to
- (7) Pessimism and loss of confidence, which in turn lead to
- (8) Hoarding and slowing down still more the velocity of circulation. The above eight changes cause complicated disturbances in the rates of interest, in particular,
- (9) a fall in the nominal, or money, rates and a rise in the real, or commodity, rates of interest. (Econometrica, 1933, Volume 1, p. 342)

(Check this [previous blog entry](#) for more on this topic)

In its own way, this is a very simple process to both understand and to model. To understand it, all we have to do is look at the current economic situation in the USA—all nine stages of Fisher's process are already well under way there. I've also modelled the debt component of this process in my papers on [financial instability](#) (and the deflation aspect too in other research I've yet to publish, but which will be in my forthcoming book for Edward Elgar, Finance and Economic Breakdown [expected publication date is 2011]).

So why didn't Bernanke—and other neoclassical economists—understand Fisher's explanation and develop it?

Because an essential aspect of Fisher's reasoning—and also a crucial step in modelling the process of debt-deflation—was the need to abandon the fiction that a market economy is always in equilibrium.

The notion that a market economy is in equilibrium at all times is of course absurd: if it were true, prices, incomes—even the state of the weather—would always have to be "just right" at all times, and there would be no economic news at all, because the news would always be that "everything is still perfect". Even neoclassical economists implicitly acknowledge this by the way they analyse the impact of tariffs for example, by showing to their students how, by increasing prices, tariffs drive the supply above the equilibrium level and drive the demand below it.

The reason neoclassical economists cling to the concept of equilibrium is that, for historical reasons, it has become a dominant belief within that school that one can only model the economy if it is assumed to be in equilibrium.

From the perspective of real sciences—and of course engineering—that is simply absurd. The

economy is a dynamic system, and like all dynamic systems in the real world, it will be normally out of equilibrium. That is not a barrier to mathematically modelling such systems however—one simply has to use "[differential equations](#)" to do so. There are also many very sophisticated tools that have been developed to make this much easier today—largely [systems engineering and control theory](#) technology (such as Simulink, Vissim, etc.)—than it was centuries ago when differential equations were first developed.

Some neoclassicals are aware of this technology, but in my experience, it's a tiny minority—and the majority of bog standard neoclassical economists aren't even aware of differential equations (they understand [differentiation](#), which is a more limited but foundational mathematical technique). They believe that if a process is in equilibrium over time, it can be modelled, but if it isn't, it can't. And even the "high priests" of economics, who should know better, stick with equilibrium modelling at almost all times.

Equilibrium has thus moved from being a technique used when economists knew no better and had no technology to handle out of equilibrium phenomena—back when Jevons, Walras and Marshall were developing what became neoclassical economics in the 19th century, and thought that comparative statics would be a transitional methodology prior to the development of truly dynamic analysis—into an "article of faith". It is as if it is a denial of all that is good about capitalism to admit that at any time, a market economy could be in disequilibrium—without that being the fault of bungling governments or nasty trade unions and the like.

And so to this day, the pinnacle of neoclassical economic reasoning always involves "equilibrium". Leading neoclassicals develop DSGE ("Dynamic Stochastic General Equilibrium") models of the economy. I have no problem—far from it!—with models that are "Dynamic", "Stochastic", and "General". Where I draw the line is "Equilibrium". If their models were to be truly "*General*", they should be "Disequilibrium" models—or models in which whether the system is in or out of equilibrium at any point in time is no hindrance to the modelling process.

Instead, with this fixation on equilibrium, they attempt to analyse all economic processes in a hypothetical free market economy as if it is always in equilibrium—and they do likewise to the Great Depression.

Before the Great Depression, Fisher made the same mistake. His most notable contribution (for want of a better word!) to economic theory was a model of financial markets as if they were always in equilibrium.

He portrayed the market for loans as essentially no different from any other market in neoclassical thought: it consisted of independent supply of and demand functions, and a price mechanism that set the rate of interest by equating these two functions—thus putting the market into a state of equilibrium.

However even with this abstraction, he had to admit that there were two differences between the "market for loanable funds" and a standard commodity market: firstly that the loanable fund market involves commitments over time, whereas in standard neoclassical mythology, commodity markets are barter markets where payment and delivery take place instantaneously; and secondly, it is undeniable that sometimes people don't live up to those commitments over time—they go bankrupt.

Fisher dealt with these differences in the time-honoured neoclassical manner: he assumed them

away. He imposed two conditions on his models:

"(A) The market must be cleared-and cleared with respect to every interval of time. (B) The debts must be paid." (Irving Fisher, 1930, *The Theory of Interest*. New York: Kelley & Millman p. 495)

Fisher did discuss some problems with these assumptions, but in keeping with the neoclassical delusion that one couldn't model processes out of equilibrium, these problems didn't lead to a revision of his model.

Of course, if Fisher had been a realist, he would have admitted to himself that a model that presumes the economy is always in equilibrium will be a misleading guide to the behaviour of the actual economy. But instead, as seems to happen to all devotees of neoclassical economics, he began to see his model as the real world—and used it to explain the Stock Market bubble of the 1920s as not due to "irrational exuberance", but due to the wonderful workings of a market economy in equilibrium.

Since Wall Street was also assumed to be in equilibrium, stock prices were justified. And he defended the bubble as representing a real improvement in the living standards of Americans, because:

"We are now applying science and invention to industry as we never applied it before. We are living in a new era, and it is of the utmost importance for every businessman and every banker to understand this new era and its implications... All the resources of modern scientific chemistry, metallurgy, electricity, are being utilized-for what? To make big incomes for the people of the United States in the future, to add to the dividends of corporations which are handling these new inventions, and necessarily, therefore, to raise the prices of stocks which represent shares in these new inventions." (Fisher, October 23rd 1929, in a speech to a bankers' association)

Have you heard that one before: a "new era"? If I had a dollar for every time I saw that twaddle used to justify companies with negative earnings having skyhigh valuations during the Internet Bubble...

Fisher even dismissed the 6% fall in the stock market that had occurred in the day before his speech as due to "a certain lunatic fringe in the stock market, and there always will be whenever there is any successful bear movement going on... they will put the stocks up above what they should be and, when frightened, ... will immediately want to sell out."

The future, he told the assembled bankers, was rosy indeed:

Great prosperity at present and greater prosperity in view in the future ... rather than speculation ... explain the high stock markets, and when it is finally rid of the lunatic fringe, the stock market will never go back to 50 per cent of its present level... We shall not see very much further, if any, recession in the stock market, but rather ... a resumption of the bull market, not as rapidly as it has been in the past, but still a bull rather than a bear movement." (Fisher 1929)

Prior to this speech, he had made his fatefully wrong prediction on the future course of the Dow Jones in the New York Times. For the record, his statement was:

"Stock prices have reached what looks like a permanently high plateau. I do not feel that there will soon, if ever, be a fifty or sixty point break below present levels, such as Mr. Babson has predicted. I expect to see the stock market a good deal higher than it is today within a few months"

Well, so much for all that. The stock market crash continued for three years, unemployment blew out from literally zero (as recorded by the [National Bureau of Economic Research](#)) to 25 percent, America's GDP collapsed, prices fell... the Great Depression occurred.

At first, Fisher was completely flummoxed: he had no idea why it was happening, and blamed "speculators" for the fall (though not of course for the rise!) of the market, lack of confidence for its continuance, and so on... But experience ultimately proved a good if painful teacher, when he developed "the Debt-Deflation Theory of Great Depressions".

An essential aspect of this new theory was the abandonment of the concept of equilibrium.

In his paper, he began by saying that:

We may tentatively assume that, ordinarily and within wide limits, all, or almost all, economic variables tend, in a general way, to ward a stable equilibrium. In our classroom expositions of supply and demand curves, we very properly assume that if the price, say, of sugar is above the point at which supply and demand are equal, it tends to fall; and if below, to rise.

However, in the real world:

New disturbances are, humanly speaking, sure to occur, so that, in actual fact, any variable is almost always above or below the ideal equilibrium.

Therefore in theory as well as in reality, disequilibrium must be the rule:

"Theoretically there may be—in fact, at most times there must be—over- or under-production, over- or under-consumption, over- or under spending, over- or under-saving, over- or under-investment, and over or under everything else. *It is as absurd to assume that, for any long period of time, the variables in the economic organization, or any part of them, will "stay put," in perfect equilibrium, as to assume that the Atlantic Ocean can ever be without a wave.*" (Fisher 1933, p. 339; emphasis added.)

He then considered a range of "usual suspects" for crises—the ones often put forward by so-called Marxists such as "over-production", "under-consumption", and the like, and that favourite for neoclassicals and "market economists" even today, of blaming "under-confidence" for the slump. Then he delivered his intellectual (and personal) coup de grâce:

I venture the opinion, subject to correction on submission of future evidence, that, in the great booms and depressions, each of the above-named factors has played a subordinate role as compared with *two dominant factors, namely over-indebtedness to start with and deflation following soon after*; also that where any of the other factors do become conspicuous, they are often merely effects or symptoms of these two. In short, the big bad

actors are debt disturbances and price- level disturbances.

While quite ready to change my opinion, I have, at present, a strong conviction that these two economic maladies, the debt disease and the price-level disease (or dollar disease), are, in the great booms and depressions, more important causes than all others put together...

Thus over-investment and over-speculation are often important; but they would have far less serious results were they not conducted with borrowed money. That is, over-indebtedness may lend importance to over-investment or to over-speculation.

The same is true as to over-confidence. *I fancy that over-confidence seldom does any great harm except when, as, and if, it beguiles its victims into debt.* (Fisher 1933, pp. 340-341; emphases added)

From this point on, he elaborated his theory of the Great Depression, which had as its essential starting points the propositions that debt was above its equilibrium level, and that the rate of inflation was low. Starting from this position of disequilibrium, he described the 9 step chain reaction shown above.

Of course, if the economy had been in equilibrium to begin with, the chain reaction could never have started. By previously fooling himself into believing that the economy was always in equilibrium, he, the most famous American economist of his day, completely failed to see the Great Depression coming.

How about Bernanke today? Well, as Mark Twain once said, history doesn't repeat, but it sure does rhyme. Just four years ago, as a Governor of the Federal Reserve, Bernanke was an enthusiastic contributor to the "debate" within neoclassical economics that the global economy was experiencing "[The Great Moderation](#)", in which the trade cycle was a thing of the past—and he congratulated the Federal Reserve and academic economists in general for this success, which he attributed to better monetary policy:

"In the remainder of my remarks, I will provide some support for the "improved-monetary-policy" explanation for the Great Moderation."

Good call Ben. We have now moved from "The Great Moderation!" to "The Great Depression?" as the debating topic du jour.

On that front, his analysis of what caused the Great Depression certainly doesn't imbue confidence. This chapter (first published in 1995 in the neoclassical *Journal of Money Credit and Banking*—the same year my Minskian model of Great Depressions was published in the non-neoclassical *Journal of Post Keynesian Economics*)² considers several possible causes:

- A neoclassical, laboured re-working of Fisher's debt-deflation hypothesis, to interpret it as a problem of "agency"—"Intuitively, if a borrower can contribute relatively little to his or her own project and hence must rely primarily on external finance, then the borrower's incentives to take actions that are not in the lender's interest may be relatively high; the result is both deadweight losses (for example, inefficiently high risk-taking or low effort) and the necessity of

2 *Journal of Post Keynesian Economics*, Vol. 17, No. 4, pp. 607-635.

costly information provision and monitoring)" (p. 17);

- Aggregate demand shocks from the return to the Gold Standard and its effect on world money supplies; and
- Aggregate supply shocks from the failure of nominal wages to fall—"The link between nominal wage adjustment and aggregate supply is straightforward: If nominal wages adjust imperfectly, then falling price levels raise real wages; employers respond by cutting their workforces" (p. 21).

None of these "causes" includes excessive private debt—the phenomenon that I hope now even Ben Bernanke can see was the cause of the Great Depression—and the reason why he and neoclassical economists like him are no longer discussing "The Great Moderation".