Comment on Eichengreen and Mitchener
"The Great Depression as a Credit Boom Gone Wrong"

by Charles Goodhart

I am not yet as familiar with Kris Mitchener's work as I hope that I will shortly become, but I do know that any work co-authored by Barry Eichengreen will be lucid, well written, sensible and entertaining. This paper is no exception.

Nevertheless a discussant is not supposed just to shower praise. I am supposed to earn my keep by probing for weaknesses and criticisms. So here goes.

I cannot refrain from starting by pointing out a splendid gaffe. On page 51, the authors write as follows, "monetary policy is a blunt instrument..... It can result in overkill, as ..... Benjamin Strong and then George Harrison learned starting in 1929." Overkill is indeed *le mot juste* since Benjamin Strong had already died in October 1928! In a somewhat similar vein I found it quite hard to credit the claim, admittedly made by Schedvin and not by the authors here, in footnote 55, page 29, that there were a number of general managers of Australian financial institutions in the early 1930s who were already comparatively senior officers in their firms at the end of the 1880s.

Let me, however, become more serious. Barry and Kris use numerous adjectives to describe credit expansion in the 1920s and 1990s, such as ample, elastic and abundant. I would like to suggest that bank credit is, almost always, ample, elastic and abundant. The point is that central banks set official short-term rates, and then stand ready to supply reserves, with infinite elasticity, at that chosen rate, until they decide to change the official rate. With their access to additional reserves thus effectively guaranteed, commercial banks will in turn make loans freely available to

all those seeking such loans, at a spread above the official rate and dependent on the borrower meeting certain risk and collateral requirements. Credit is, therefore, by institutional construction, made ample, elastic and abundant at almost all times.

What interpretation then can we give to the phrase credit boom? One more prosaic interpretation is just that the general level of nominal interest rates was too low to maintain output equilibrium and low and stable inflation, and that the growth rates of money and credit were a valid leading indicator of that. The problem with that interpretation is that inflation was low and stable in both the 1920s and 1990s, and output growth, though encouragingly rapid, was certainly thought at the time in each case to be on a new high plateau.

A second, and more interesting, potential meaning of the phrase credit boom is a relaxation by banks in the terms on which they would supply credit, for any given level of interest rates, a supply shift bringing a softening of risk and collateral conditions. This would be represented by such phenomena as higher loan to collateral value ratios, declining risk spreads, and shifts in the composition of borrowers to higher risk categories. I reckon that this is rather what Barry and Kris have in mind. The problem with this is that the micro-level evidence of such a relaxation of lending standards, (given the level of official interest rates), is hard to find or, when there is some anecdotal evidence, e.g. on examples like Ponzi and the Florida land boom, difficult to show whether it had significance at the aggregate, macro-level. And to be honest I do not feel that they have obtained sufficient evidence to make out a proper case that relaxation of lending standards played a major role either in the 1920s or the 1990s.

The other main candidate here for jointly explaining the 1920/30s and the 1990/2000s is the Stock Market, which exhibited a sharp run-up to a peak in 1929/1999 and subsequent equally sharp

decline. The authors note its effect on wealth, Tobin's q and business investment; and that, of their three so-called credit indicators, I quote, "only share prices are strongly related to subsequent output movements", p. 23.

One can hardly fault them for using the term `bubble' since virtually everyone else does so also. But in fact in economic theory the term `bubble' has some stringent existence conditions, which neither the 1920s or late 1990s actually meet. What they both exhibited was an unsustainable deviation from equilibrium, unsustainable because the expectations for company earnings growth and stock returns could not possibly be met in the longer term by an economy growing at a rate of around 3 to 4 percent. As Allan Meltzer notes, in his recent first volume on the Fed, corporate profits rose at an annual rate of 12 percent between the end of 1924 and September 1929, and the value of traded stocks rose twice as fast again. No doubt in the late 1920s, as in the late 1990s, many investors, as 1990s surveys showed, extrapolated 20% plus stock returns into the wild blue yonder, and this is just not sustainable. So why did it happen? I am a firm believer in the analysis, which the authors attribute to Carlita Perez in a book which I have not yet read, about stock market overreactions to new network technologies, see pages 39-41, but I doubt whether it is enough on its own. You need to mix in a bit of irrational exuberance, and greed and envy, into the pot alongside the overreaction to high tech to get the full extent of unsustainable divergence from equilibrium.

One of the endemic problems in this field is simultaneity, endogeneity. Everything is related to everything else. The authors take as their indicators of credit booms three variables, the ratio of M2 to GNP, the ratio of investment to GNP, and the ratio of equity prices to the CPI. All are somewhat dubious metrics of credit expansion. As Brunner and Meltzer have emphasised, the markets for credit and money are distinct in important ways. Again investment and equity price increases are as much a cause of credit expansion as a result of it.

Next, given these three disparate, not to say dubious, measures of credit expansion there is the question of trying to combine them into a composite index, though I rather question whether this latter exercise was worth doing anyhow. Be that as it may, I do not fully follow what they have done. What they say that they have done is as follows:-

> "The composite index is constructed by weighting the three ratios by their respective signal-to-noise ratios – that is, by the ratio of the share of subsequent crises successfully predicted by data through 1928 to the share of false positives, where the signaling threshold is set to maximize this ratio."

Presumably this is done on the assumption that the appropriate weighting of the ratios is the same for all countries, a very dubious assumption given that stock markets have played a very different role in various countries. And not only is the definition of a crisis inherently fuzzy, but also many of the major countries in the sample had had no crisis by 1928. I wonder how far the results and weightings may be driven by a few crisis observations. More seriously the authors do not report their probit equation, how well it fit on significance tests, and whether, or not, there were country dummies. Being a sceptical character myself I wondered whether the failure to report here was due to rather ill-fitting results. Again the authors take comfort from the weights being roughly equal, (footnote 25); I see no reason in theory, or from my own empirical work, to suppose that such ratios should have equal weights. For example a Monetarist would expect a higher weight on the M2 ratio, and a Keynesian on the investment ratio.

The composite indices are then shown in Figure 3 on page 64, again presumably averaged over all countries. It is a bit surprising that 1919 shows a higher peak than 1929, perhaps partly due to the influence of the Scandinavian countries, see Figure 4. While I liked the literary discussion of the cycles in the various countries in the 1920s, I have to say that the multitudinous small charts in Figure 4 left me none the wiser. Nor is its overall explanatory effect, despite being partly

calibrated in-sample to maximise that effect, very strong, as revealed in Figure 5. To be honest, perhaps brutally so, I did not feel that the econometrics really added much to the analysis.

Let me, however, finish by briefly touching on some of the related policy issues. First, can we observe an unsustainable asset price deviation while it is currently happening? In my own view the answer is yes, and I would give in evidence the British housing price booms of 1988-90 and 2000-2. If we, or rather the authorities, can do so, why then do they not stop of themselves, as rational expectations would suggest? Perhaps a combination of limitations on short selling, differences of opinion, and belief in one's own ability to sell before the rest may provide some explanation. Should the authorities react to such asset price booms over and above that necessary to respond to their prospective future modal effect on output and goods and services inflation? Probably so in principle in order to try to avoid the potentially severe, and certainly asymmetric, effect of a future crash. I am aware of the argument that claims that a larger rise in interest rates, say in 1925-27 or 1999, would have caused a fall in output without halting the stock market surge, but I have seen no convincing arguments to support that assertion. In practice, however, I think it well-nigh politically impossible for even independent central bankers to raise interest rates, by more than a smidgen, when both inflation and forecasts of inflation are benign and growth remains close to its perceived tread rate, just because the central banker judges that an asset price has diverged from its equilibrium. It is not so easy to justify in public any judgment about the ex ante deviation from some dubiously estimated equilibrium level.

Perhaps a more useful question is how to respond when such an asset/credit boom does collapse. The current answer seems to be that, should one asset market, in this case the stock market, collapse, then the right response is to recreate another asset price/credit boom in another market, in this case the housing market. The hope is that, by the time the housing market does subside,

taking consumption down with it, that business confidence and investment will have recovered. Moreover, for a variety of reasons, some fortuitous, the Anglo-Saxon countries are engaged in some sizeable Keynesian-type contracyclical fiscal policies, although keeping rather quiet about it. What will happen in the euro-zone, where neither of these stimulating factors are as strong, is even less promising, especially if the euro should appreciate further. I wonder whether the ECB would contemplate so-called unconventional measures if deflation in the euro-zone should intensify and official interest rates fall to zero. But fortunately that remains a hypothetical question.