Did Monetary Laxity in Japan Cause the Bubble?

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Japan's extended economic stagnation since its stock market peaked on December 29, 1989, has prompted a series of investigations, recommendations, and self-examinations, both in Japan and abroad. For monetary policy, two aspects of the situation have attracted particular attention. One is the ability or inability of a central bank to successfully raise the price level and inflation expectations when the nominal interest rate is at zero and the banking system is reluctant to lend. The other is the appropriate response of a central bank to an asset price bubble: whether the central bank can or should try to "prick" such a bubble when it is expanding. This article will consider the latter set of issues as raised by the Japanese bubble.[1]

Can a central bank prevent a bubble?

The topic is of more than retrospective or theoretical concern. In recent years the American and European equity markets have had just about an identical boom, and so far a slightly milder bust, to that of the Japanese market – and the Japanese and American real estate markets both followed similar paths at about a two-year lag to stocks. These are hardly the only examples. A series of applied research studies done at international financial institutions have shown that there have been a great number of asset price booms and busts, if not definitively bubbles, and these are often associated with negative economic outcomes.

The main point to be made here is that it takes more than a bubble to become Japan. While asset price booms and even busts are not uncommon, Japan's Great Recession is, and it was not the bubble and its bursting that produced this outcome. The loud concern expressed in influential parts of both the press and the official sector with regards to the implications of the US asset price boom (for example, in editorials of *The Economist* and the *Financial Times*), however, seems to say that the destiny of any bubble economy is an extended recession.

Some noted German commentators (e.g., Horst Siebert) have argued that the Bundesbank's resistance to international pressures for overstimulus in the mid-1980s was what saved Germany from Japan's fate. More recently, Otmar Issing of the European Central Bank has suggested that a part of the reason for having monetary growth targets is to notice and resist overexpansions of credit. All these participants in the discussion would lay the responsibility for this destiny of recession at the failure of the central banks involved to take action against the rise of bubbles.

These concerns and comments, while understandable, are not supported by study of the Japanese case. Monetary policy clearly was (and remains) a contributing factor to Japan's stagnation, but it was not disregard of asset prices on their way up which produced this outcome. Spirited academic debates about whether central banks should directly target asset prices, either as part of an inflation-targeting framework or not, need a different case on which to hook their analyses. As I will argue, the Bank of Japan (BOJ) should have been able to tighten policy more quickly in the late 1980s without any particular reference to asset price movements – and in any event, monetary policy might well have been unable to stop those movements. Negative developments in the Japanese economy after the bubble were hardly driven by the fall in asset values, but rather by other problems in the Japanese economy (including overly tight monetary policy itself). Comparative analysis broadly of other recent cases of asset price booms supports my conclusion that a primary concern for monetary policy should be

Not every bubble ends in a prolonged recession

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[1] A more detailed analysis, including consideration of the related issues of what are the effects of a bubble bursting, how a central bank should respond, and what promotes restructuring, on which this article is based can be found in Adam S. Posen, "It Takes More Than A Bubble To Become Japan," in *Monetary Policy and Asset Prices,* Anthony Richards, ed., Reserve Bank of Australia, 2003.

how to encourage restructuring in the aftermath of a boom, not the boom itself.

As noted, the belief is widespread that excessive laxity of Japanese monetary policy in 1986 to 1989 caused the bubble in Japanese equity and real estate prices. Bank of Japan officials for the last 13 years have bemoaned this fact, vowing not to repeat the mistake. Outside observers of a more monetarist bent have largely agreed with this lesson, thanking their central bankers for being able to resist pressures for undue ease. And both academics and market pundits have chimed in as well, attributing the bubble to BOJ inaction. For some, the message is a reaffirmation of the importance of central bank independence, since the BOJ is thought to have succumbed to pressure from the Ministry of Finance (MOF) for ease, and in this view the MOF itself was easing due to pressure from the US government. For others, the lesson is that central banks should take asset prices into account explicitly when setting policy. Either way, according to this common view, the bubble arose, or at least grew large, because of excessive liquidity.

The Japanese bubble has been blamed on monetary policy

This claim that monetary policy caused Japan's bubble, however, should not be taken for granted. We need to decide whether excessive monetary ease was a sufficient condition for the Japanese bubble ("if there is a sustained monetary ease, then a bubble occurs"), a necessary condition for the Japanese bubble ("if a bubble occurs, then there must have been prior monetary ease"), or both. The theoretical foundation for such claims turns out to be little more than one of coincident timing – in Japan in the second half of the 1980s, money supply was growing, velocity was declining, and no increase showed up in wholesale or consumer prices, so the contemporaneous growth in real estate and equity prices must have been the result of this liquidity increase. Yet, this is a rather tenuous link to make. As Japan itself has demonstrated in the last few years, one can have all these conditions present (expanding money supply, declining velocity, no effect on the price level) and still see no increasing trend in asset prices. Without some forward-looking expectations on the part of investors that returns will be rising relative to base interest rates, that profits will be growing, there will be no buying of real estate or equities.

For monetary policy to be the source of a bubble, the relative price of one part of the economy (here financial and real estate assets) has to be pumped up by a blunt instrument that usually affects all prices in the economy. And it has to do so in such a way that the relative price shift either does not raise expectations of a countervailing shift in monetary policy in the near future (which relies on strange notions of what the imputed future income from increasing land and stock prices will generate), or is expected to only be affected by monetary policy on the upside but not on the downside (which there is no reason to believe, if liquidity is the source of the relative price shift in the first place). Either way, this has to take place when we know both analytically and empirically that the relationship between a policy of low interest rates or high money growth and equity or real estate prices is actually indeterminate over time.[2]

Of course, one can resolve this logical tension by positing that the investors have unrealistic expectations about monetary policy. Some BOJ research has done so, for example, by characterizing with some justification Japanese investors in the bubble years as believing unduly in low interest rates over a decade or longer horizon. Then, however, it is the expectations of investors, which are driving the asset price process, not the actions of monetary policy. In that case, any monetary policy short of starving the economy of credit could give rise to a boom, and a boom can arise even without excessive ease.

Monetary ease and asset price inflation

Before evaluating with respect to the Japanese case the merits of this claim versus the more common assumption that monetary laxity causes booms, it is worth pointing out that neither claim has been established with respect to bubbles or asset price booms in general. If this supposed causal link between monetary laxity and the Japanese bubble is not as apparent in other known cases of asset price booms, then there clearly is more at work in the Japanese case than just monetary ease. To examine this question, we take a list of asset price booms in the OECD economies and match them up with a new dataset created to offer simple indicators of loose monetary conditions.[3]

[2] For example, Michael Hutchison pointed out using Japanese data that a drop in interest rates today might drive up housing prices in the short-term by making them more affordable, but in the medium-term tends to drive prices down because it portends a monetary tightening or slower growth. Aggregate supply factors tend to dominate monetary factors as consistent determinants of land prices.
[3] The list of asset price booms is taken from Michael Bordo and Olivier Jeanne (2002). "Monetary Policy and Asset Prices: Does 'Benign Neglect' Make Sense?," International Finance, 5 (2): 139–164.

Looking at 15 countries (including Japan) over the periode 1970 to 2000 for industrial share prices and 1970 to 1998 for residential property prices, we have a list of 18 booms in property prices and 24 in share prices. For our purposes, this generates a list of booms independent of our markers of monetary ease and, in the next section, of deflation. Identifying periods of monetary ease would appear to be much harder. For the purposes of examining the link between monetary ease and booms, however, a simple approach seems justified. In the discussion of monetary policy with respect to perceived bubbles, particularly but not just with regard to Japan, there is usually the sense that it took significant sustained ease to cause the bubble – booms do not seem to pop up frequently enough to be associated with minor mistakes of overly easy monetary policy.

So for our investigations we utilize two broadly applicable measures of monetary ease: first, whether the central bank's real overnight or instrument interest rate is less than 1 percent for a sustained period; second, whether growth in a credit aggregate greatly exceeds the aggregate's average growth rate for a sustained period. We create a list of these periods for the same 15 OECD countries over the same time-period as in the sample of booms, and find 38 periods of monetary ease by the M3 criterion and 11 periods of monetary ease by the real interest rate criterion. We see whether asset price booms occurred within 36 months of the end of one of these periods of monetary ease.

So what is the response to the question, "if ease, then boom?" The results do not support the popular image of sustained monetary ease being a sufficient condition for a boom. Of 38 periods of ease identified by the M3 criterion, only 12 resulted in share price booms and 12 in property booms (the lists are not identical); of 11 periods of sustained ease by the interest rate criterion, no booms followed within 36 months. In any event, the absence of any booms in response to low real interest rates would seem to put the focus on credit market conditions more narrowly, but even by that criterion, fewer than one-in-three periods of significantly above average credit expansion are followed by booms.

The idea that monetary ease alone is a sufficient condition for asset price booms might appear to be something of a straw man, though it is one that is often put forward without question in the discussions of the Japanese bubble. Perhaps this confusion is because those speaking about Japan actually subscribe to the idea of sustained monetary ease as a necessary, not a sufficient, condition for a boom to occur – if there is an asset price boom, then there must have been prior ease. In other words, on this hypothesis, while there can be periods of ease which do not result in bubbles, there are no bubbles that did not result from monetary ease. This relates closely to the idea of central banks "pricking" asset price bubbles, that interest rate increases somehow remove the loose credit conditions on which the bubble is predicated.

Utilizing the same list of booms and periods of monetary ease, we consider two possibilities – that ease must have preceded the start of the boom or that at a minimum there must have been ease during the boom. Neither elicits much support from the data – for property and share price booms, fewer than one-third of them were either preceded by or accompanied by sustained ease in credit growth; none of the share price booms were preceded or accompanied by sustained ease on these criteria. The results are therefore far from supportive of monetary laxity as either a necessary or a sufficient condition for asset price booms, at least with regards to the advanced OECD economies since 1970.

The evidence does not support the notion that monetary ease is a necessary and sufficient condition for a bubble

Did political pressure cause too much ease?

The direct association often drawn between the Bank of Japan's monetary policy stance in the late 1980s and the Japanese bubble therefore bears closer scrutiny. In short, there is more to the story than just that the BOJ did not raise rates in time. The (Japanese) textbook version of the story is that international pressure upon Japan from the United States led to too much ease from the BOJ, and that ease led to the bubble. Japan had come out of the second oil shock, carefully closing its public deficits and managing money for price stability. At the time, protectionist pressures were mounting in the US Congress due to the large US trade deficits and the rise of the Reagan-Volcker dollar. First in the Plaza Accord of September 22, 1985 and then (after additional bilateral pressures from the US government) in the Louvre Agreement of February 20, 1987, the Japanese government agreed to stimulate domestic growth and help manage an appreciation of the yen against the dollar.

Under direction from the MOF, the BOJ began to make interest rate cuts in January 1986, starting with an overnight rate of 5 percent. By the time of the last cut three years later, the BOJ had cut its overnight rate to 1 percent. Meanwhile, the MOF did not wish to imperil its hard won budgetary consolidation by engaging in expansionary fiscal policy, so the burden of stimulus fell totally on the BOJ. The yen appreciated from a low of ¥240 per dollar to ¥125 per dollar, inducing the short-lived *Endaka* (high-yen) recession of 1985 to 1986. The *Heisei* boom, that we think of as the bubble years, began shortly thereafter. No obvious increases in the CPI or WPI arose for the remainder of the decade, and most private sector forecasts were for continued low inflation (Ahearne et al. 2002). The 'Black Monday' US stock market crash of October 1987 provided another reason for the BOJ to keep interest rates low. In this version of the story, the issue is whether the BOJ could have raised interest rates some time in 1988 and in so doing could have pricked the bubble.

What transformed monetary ease into asset price inflation

Did investors have unrealistic expectations?

Yet, none of this explains why there should have been a bubble in Japanese equity and real estate markets. Something had to transform the easy monetary policy into asset price appreciation rather than either more general price pressures or sustainable growth. Again, the sole argument for blaming monetary policy seems to be one of timing. Even that, however, does not hold up well. Land prices were already rising before the Plaza Accord, let alone the full force of the BOJ's rate cuts: one common index shows a 12.7 percent increase in FY1984 and a 28.9 percent increase in FY1985. And the run-up in stocks began even when the *Endaka* experience was fresh in people's minds, but the only policy commitment of the BOJ, not by choice, was supposedly to keep the yen on an upward trend.

If the decision to cut rates in 1986 to 1989 was truly a political decision in response to US pressures on the MOF, and MOF pressures on the BOJ – as reported upon in the press and clearly grumbled about by BOJ officials – why was the BOJ's frustrated case for tighter policy not persuasive to the bond markets? Surely, if it were clear that the BOJ were violating its normal policy priorities due to obvious international pressure, the idea that such low rates would be sustainable without any effect on inflation or medium-term growth would have been discounted. The fault for the asset price increases seems to lie in the unrealistic expectations of participants in a bubble, not in Japanese monetary ease.

Let us turn the question around: should the BOJ have believed in the macroeconomics of the *Heisei*-boom in the second half of the 1980s? Or should they have been in a position to discount this story? The debate among monetary economists over this period usually is cast as whether or not a central bank can read asset prices any better than financial markets and can assess the evaluation of equities. As the Japanese case of the late 1980s illustrates, this debate is misfocused. Whatever the state of asset prices, central banks have to assess the potential growth rate of the economy they oversee, and this macroeconomic assessment can be done largely independently of any specific relative prices in the economy. For Japan in 1987 to 1991, output was 2 percent a year above trend, and 1988 showed the highest growth rate (7 percent) seen since the mid-1970s.

Meanwhile, just looking at overall market averages, the stock and bond prices implied either 15 or more years of low interest rates or a massive drop in the risk premium. Could a significant drop in the risk premium be held credible for aging Japanese savers, given well-known demographic trends and savings behavior? Alternatively, how could interest rates be expected to stay low indefinitely if the boom's euphoria was based on a real increase in the potential rate of output – and therefore of the economy's natural rate of interest – over the long run? The apparent surge in Japanese labor productivity in the late 1980s was something to be suspicious about. Given limited deregulation before the 1990s, the end of catch-up growth, and the absence of any new technological revolution, what would justify a near-doubling of productivity growth from its around 3 percent average of 1979 to 1987? What precedent was there for a 2 percent jump in trend productivity anywhere except emerging markets making the great leap as Japan already had in the 1950s?

In short, the BOJ could have decided to tighten policy in the 1980s without any reference to asset prices beyond the most general evaluation of interest rate expectations. It was not lack of explicit attention to rises in asset prices that led monetary policy astray. No expectations based on a reasonable evaluation of monetary policy could have supported these macroeconomic assumptions embodied in the overall asset market. Recent work by Kenneth Kuttner and myself establishes that for any of a wide range of potential output estimates – using real-time available information and varying in method but never explicitly including asset prices – the BOJ would have normally been expected to raise rates some time in 1987 to 1988.[4] Of course, even if interest rates had been increased, it is not evident that alone would have 'popped' the bubble.

One could try to restore the link between the Japanese asset price bubble and monetary policy by asserting that a firm belief in ongoing pressure from the United States for yen appreciation in response to the United States's endemic trade deficits, rather than actual faith in the potential output measures implied, was what underlay the belief in monetary ease and thus the boom. Perhaps that would have been more rational than belief in the bubble per se. As Ronald McKinnon and Kenichi Ohno have shown, however, at least theoretically a long-term expectation of sustained yen appreciation will result in deflationary expectations (including of asset prices) in Japan. So there is no way to square this circle of the bubble somehow logically resting on expectations of future Japanese monetary policy. The bubble was based on assumptions independent of monetary policy.

Structural causes of the bubble

We should turn instead to the obvious nonmonetary factors in the creation of the Japanese bubble. These financial developments are both well within the usual remit of a central bank's surveillance, and logical justification for why the unrealistic expectations of bubble participants were fed irrespective of monetary policy. There is a consensus view among economists on how partial financial deregulation in Japan in the 1980s led to a lending boom: Japan's banks lost their best corporate customers after liberalization of securities markets allowed large firms to reduce their cost of capital by seeking direct financing. The banks' ability to move into new lines of business was still partially constrained by regulation, and their franchise value was declining, yet they retained the same large amount of loanable funds due to deposit insurance. The 'Convoy' system of financial supervision, which equated banking system stability with no closure of banks, kept overcapacity in the system, leading to low profits and undercapitalization, increasing the desire to take risks with taxpayer insured deposits.

As a result, Japanese banks made a huge shift into lending to small and medium-size enterprises (SMEs), increasing that share of their loan portfolios from 42 percent in 1983 to 57 percent in 1989, while their loan portfolios expanded by more than half. The banks nearly doubled their overall lending in selected sectors favorable to the SMEs. Companies hold substantial real estate in Japan, and used this as collateral of rising worth to borrow more; households also took advantage of rising home prices and declining lending standards (mortgage limits rose from 65 percent of home value on average to 100 percent on the assumption that land prices would go up). Two additional indicators of this lending/real estate boom arising out of the partial deregulation/ongoing deposits dynamic were the increase in Japanese banks lending directly to firms in the real estate sector, from 6 percent of total lending in 1983 to more than 12 percent in 1989, and the extreme pressure on the long-term credit banks who were most dependent on the borrowing of major corporations.

When large corporations durned to direct financing banks shifted their lending to SMEs that held collateral of rising value

It is easy to draw the chain of causality from improved access to capital for both large and small business, due to rising collateral values as well as deregulation and shifts in lending standards, to rising expectations of profits and stock prices. And in Japan's system of cross-shareholdings and banks owning significant share portfolios in borrower firms, these effects are amplified through increases in bank capital. Some belief in the rising value of land does underlie this dynamic, but once that is given, one can understand the emergence of a bubble in both stock and asset prices with no reference to monetary ease whatsoever. For comparison, remember that the analogous dynamic seen in the US savings and loan industry took place in the early and mid-1980s, hardly a time of monetary ease.

So how did the BOJ monetary policy respond to this structural source of asset price increases? The evaluation tends to turn on whether the BOJ should have raised rates in 1988 instead of waiting

[4] Kuttner, Kenneth and Adam Posen (2003). "The Difficulty of Discerning What's Too Tight: Taylor Rules and Japanese Monetary Policy," IIE Working Paper No. 03–11, December.

until 1989, and how much they should have raised rates. This is often cast as a dispute over the sufficiency of inflation targeting as a guideline for monetary policymaking, without explicitly taking asset prices into account. This dispute turns on the definition of a policy rule for the inflation targeting central bank, and the information content of asset prices for inflation and output beyond factors normally considered. As I have argued, however, the proper perspective on potential output in Japan in the second half of the 1980s on its own terms would have led to rate increases in any usual forward-looking policy rule. The issue of whether asset prices should or should not explicitly enter the central bank's target is moot (at least for Japan).

In terms of the practice of monetary policy in the real world, inflation targeting is not about simple policy rules and what data enters them, it is about communication and accountability. And it is with regard to communication and accountability that inflation targeting is indeed relevant for the behavior of the BOJ in the late 1980s, as well as for other central banks facing asset price booms. The BOJ ultimately was slow to raise rates and then raised them high and kept them high, because around 1987 it radically increased its relative weight on inflation versus output goals and discounted the information from developments in the real economy.

A policy of proper inflation targeting would have reversed monetary ease in 1988

It is ironic that the BOJ began approximating an "inflation nutter," in Mervyn King's sense of the term, in the late 1980s, in contrast to the frequently told story about the Louvre Agreement and political pressures (not to mention Black Monday) causing monetary laxity. Senior BOJ officials have indicated as much by saying that it would have been politically impossible to raise rates earlier than when the BOJ did without evidence of inflationary pressures – precisely when information from the potential growth side was offering that evidence. Had the BOJ been under an inflation-targeting regime, the sole focus on inflation would have been revealed to the public and (one hopes) reversed; conversely, had the BOJ had an inflation targeting communications framework to draw upon, they could have conveyed to the public the inflationary pressures that were evident, even if not showing up yet in the WPI or CPI. In any event, the monetary ease in Japan in 1987 to 1989 was not the result of the bubble not being taken into account, just as the bubble was not the result of the monetary ease.