

Asset price bubbles: implications on, and approaches to, monetary policy and financial stability

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Abstract

Under an inflation-targeting regime, the central bank's primary responsibility is attaining price stability. With the large fluctuations in asset prices, being closely linked to financial and macroeconomic instability, monetary authorities have recognized the harsh effects of asset price bubbles on the economy. Asset price bubbles (sharp changes in stock, property and foreign exchange prices) have resulted in both financial and foreign exchange crises, as witnessed in Asian economies in the late 1990s. Marked changes in asset prices were evident in the Philippines in the run-up to the Asian crisis in 1997. The extent of their effects on the real economy and the banking system has yet to be quantified. It was observed, however, that household consumption, investments and inflation, moved broadly with asset price changes. Indicators showed that the direct effect of asset price swings on the banks' financial condition was limited. The indirect impact from the loss of investor confidence was reflected in the decline in the asset quality and capital adequacy ratio of banks. Monetary authorities addressed the overall deterioration of the economic environment rather than the volatility of asset prices. The best safeguard against asset price reversals is an environment conducive to growth, which includes price stability and financial stability.

JEL classification: G12

Keywords: asset price bubbles, inflation, price stability, macroeconomic activity, financial stability

1. Introduction

The central bank's primary objective is the attainment of price stability. It is important for the monetary authorities, however, to be concerned with asset price bubbles (booms and busts in asset prices in the stock market, in the property

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market, and in the foreign exchange market)¹ since they influence investment and consumption behavior in a way that has led to sharp reversals in real output and inflation. Asset price bubbles have also resulted in crises affecting both the financial system and foreign exchange, as witnessed in some East Asian economies. Asset prices function as leading indicators of economic activity and contain useful information about future movements of inflation and output. Such prices could thus aid monetary authorities in deciding the appropriate stance of monetary policy under an inflation-targeting framework.

The subsequent sections cover the following topics: the nature and definition of asset price bubbles; a discussion on asset price swings in the Philippines, including their impact on macroeconomic activity, monetary and financial stability, and inflation; and the monetary policy approaches to asset price bubbles. The last section contains the conclusions.

2. Anatomy of a bubble

The term “bubble” implies that “the price of an asset, or an entire market, (rises to a level that) is no longer consistent with the underlying fundamental value”² (Cohen [1997:4]). It may also be defined as an over- or under-valuation of asset prices (Ahuja, Mallikamas, and Poonpatpibul [2003:ii]). A bubble indicates an inevitable bursting, the rush to an unsustainable peak, followed by the equally dramatic collapse.

Based on a review of past bubbles/crashes/chaos in the past three centuries, Cohen identified eight phases of a bubble from its birth to its burst. Phase 1 is the birth of the bubble, which is triggered by an external shock that sets into motion the whole cycle of the bubble. Phase 2 is characterized by easy credit and an increasing money supply that fans the boom. Even after attempts by monetary authorities to douse the heat, the asset price continues to balloon due to lags in the effect of interest rate changes. At this time, it is too late to reverse the momentum. In Phases 3 and 4, inflation rises, leading to inflation in asset prices, widespread overtrading and speculation. In Phase 5, there is mass participation at the peak by big professional players, bit players, and irrational investors seeking quick profit. Scams, fraud and scandals occur as the speculative fever heightens. From the peak of the frenzy, Phase 6 is marked by a downward drift in prices from the all-time highs as early profit-taking by insiders takes place. Nagging doubts about the trend occur and no new buyers come in. Massive selling sets in under Phases 7 and 8, leading to an inevitable collapse of the market.

¹Price bubbles in the foreign exchange market could also occur. However, this article does not include a discussion on the foreign exchange market.

²The underlying fundamental value refers to the price of the asset or value that is consistent with demand and supply market conditions in normal times. Such value is usually based on historical prices in the industry. For instance, in the stock market, an average price-earnings ratio of more than 50 percent would already indicate an overvaluation of stocks offered in the market as observed by the industry.

3. Asset price fluctuations: impact on macroeconomic activity, inflation and financial stability

3.1. What determines asset prices?

The common indicators of asset prices are equity prices and real estate prices. The rise in equity prices is determined by the fall in interest rate and investors' risk premium and the increase in the growth of earnings (Ahuja et al. [2003:15]). The opposite direction of the factors would mean a fall in equity prices. However, it is not only the fundamental fluctuation of real asset prices that monetary authorities should watch for. Measuring financial imbalances is equally important for asset price bubble identification. One such indicator in the stock market is the P/E ratio (price earnings ratio) which has to be matched against a historical trend. The use of early warning indicators for financial instability (real exchange rate, credit, equity price) could also be useful in the indirect identification of a bubble (Ahuja et al. [2003:14]).

3.2 Impact on macroeconomic activity and expected inflation

During the bubble period, misaligned asset price fluctuations influence real economic activity through wealth effects on expenditure activities and higher perceptions of wealth. Higher income from real estate and from equity could result in higher consumption and aggregate demand, thereby affecting output. Capital expenditures could increase on expectation of higher potential growth in the economy. As rising asset prices exert an expansionary impact on the economy, this may lead to inflationary pressures if the increase in aggregate demand exceeds the increase in supply (Kent and Lowe [1997:5]).

While a rise in asset prices could exert a temporary positive effect on the economy, declines in asset prices have a devastating effect. In the process of the bursting of the asset price bubble and the correction of heightened bullish expectations, a protracted recession with falling prices (or declining inflation relative to target) could set in through the following mechanisms (Shirasuka [2000: 8-9]):

1. reversed wealth effects on expenditure and on stock adjustment;
2. a reduction in the economic value of capital equipment and reduced supply capacity; and
3. balance sheet adjustments arising from the fall in asset prices and asset quality of both lenders and borrowers, and reduced credit availability.

3.3. Impact on the banking system and financial stability

As asset prices fall and the value of the capital base declines substantially, the probability of bankruptcy increases among financial institutions, firms and

individuals. Under these circumstances, lending institutions become cautious in taking risks.

As a result, the erosion of the balance sheets of firms and financial institutions and the weakening financial intermediation lead to a decline in aggregate demand in the short run, and reduces aggregate supply because of declining capital formation, in the long run (Shiraga [2000: 9]).

4. Asset price swings in the Philippines and the Asian crisis

A discussion of bubbles in the Philippines is best viewed in the context of the Asian currency and banking crises. It is widely recognized that such crises appeared to have been preceded by the bursting of a property market bubble and stock market bubble in Thailand. Before the crises, Asian economies were booming, so that prices in equity and real estate markets were rising substantially. Domestic credit was also expanding significantly, financed by increasing short-term foreign liabilities of financial institutions. A substantial fraction of the new investment was directed, however, toward real estate and the property sector, rather than in increasing productive capacity in manufacturing (Marshall [1998:14-5]). Eventually, the bubble burst and non-bank finance companies in Thailand became insolvent as a result of non-performing real estate loans. This triggered the banking crisis.

As early as 1996 and early 1997, corporate and financial problems in Thailand and South Korea were reflected in falling stock market indices, especially in the financial sector (Corsetti [1998:59]). When the Bank of Thailand announced that it would allow the baht to float due to an external payments problem, the currency crisis erupted. Almost immediately, the Asian currencies, including the Philippine peso, came under attack. Investor confidence collapsed as seen in the significant reversal of capital flows. The adverse impact of the banking and currency crises soon spread to the stock markets in the region.

Why did the banking and currency crises occur? It is difficult to pinpoint what triggered the crises. It could not be due to "rapacious foreign exchange speculators," since the sharp falls in foreign exchange values were actually a symptom rather than a cause of the crises. This is because the loss of investor confidence in the profitability of investments in a country leads to capital withdrawals. Currency speculators take advantage of the situation by betting against the currency. Thus, the perception of declining profitability led to the fall of currency markets, not vice versa. Neither could the crisis be due to "excessive optimism" or "irrationality" on the part of investors and borrowers which led to ever-increasing leverage ratios (Marshall [1998:16]).

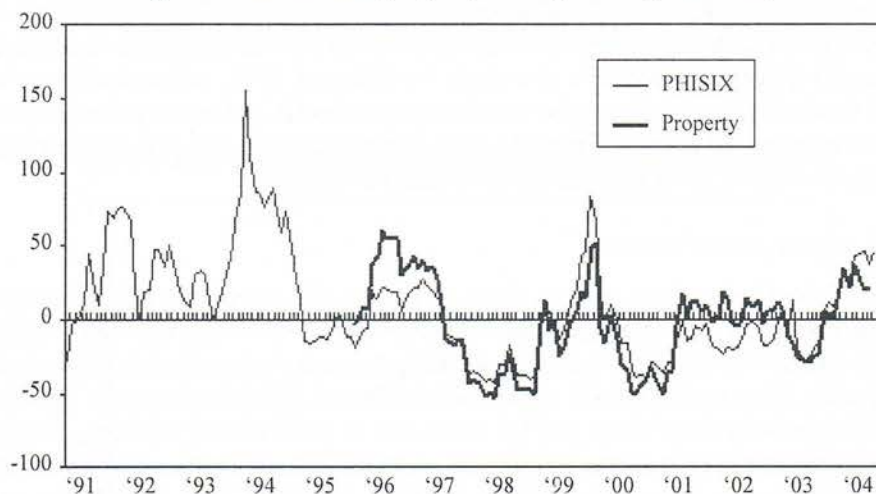
A more acceptable explanation is the moral hazard hypothesis, which explains why rational foreign investors might lend short-term to finance long-term risky projects. Due to an assumed safety net, which is the implicit government guarantee

against the loans, investors (bankers) become less diligent in monitoring their borrowers and the quality of investment projects in the belief that the government will bail them out if their investments fail (Marshall [1998:16]).

5. Indicators of asset prices in the Philippines and their fluctuations

Asset price inflation was a relatively new phenomenon in the Philippines in the early 1990s. At that time, the Philippine stock market composite index (PHISIX) was the closest indicator of asset price inflation. No comprehensive data series on real estate prices existed. However, broader measures of real estate activity were available, such as the housing and repair component of the consumer price index and the gross value added of ownership and real estate. With the dramatic growth of the property sector, more specific indicators of trends in the property sector became available. The dramatic growth of the property sector prompted the Philippine Stock Exchange to monitor separately and include property prices in the computation of the overall stock price index beginning 1994. (See Figure 1). Moreover, a foreign-based real estate firm gathered data and published prices of commercial and residential properties in two prime commercial districts in the country, providing sources of real estate data.

Figure 1. PHISIX and property index growth (in percent)



5.1. Equity prices

During the past decade, sharp fluctuations in equity and real estate prices were observed in the Philippines. The PHISIX surged by a high of 154.8 percent in 1993 from 1991 due to a sustained single-digit inflation rate, higher GNP growth, and significant structural reforms undertaken since the start of the 1990s. Among the

important reforms which contributed to brisk activity in the stock market were the liberalization of foreign investments and the lifting of foreign exchange restrictions. By the end of 1994 and 1995, however, the PHISIX posted declines of 14.1 percent and 6.9 percent respectively due to external factors (the Mexican crisis and the fall of the British-based Barings bank) and domestic factors (the rise in domestic interest rates and the buildup in inflationary pressures). The market recovered in 1996, but the increase recorded (22.2 percent) was much lower than the growth posted in 1993. The market lost momentum again in 1997 due to the outbreak of the Asian crisis. This bearish trend continued until 2003, punctuated by the short-lived recovery of the stock market in 1998 and 1999. In 2003, trading activity was further dampened by the Iraq war, outbreak of SARS, the widening fiscal deficit, and political jitters.

5.2. Real estate prices

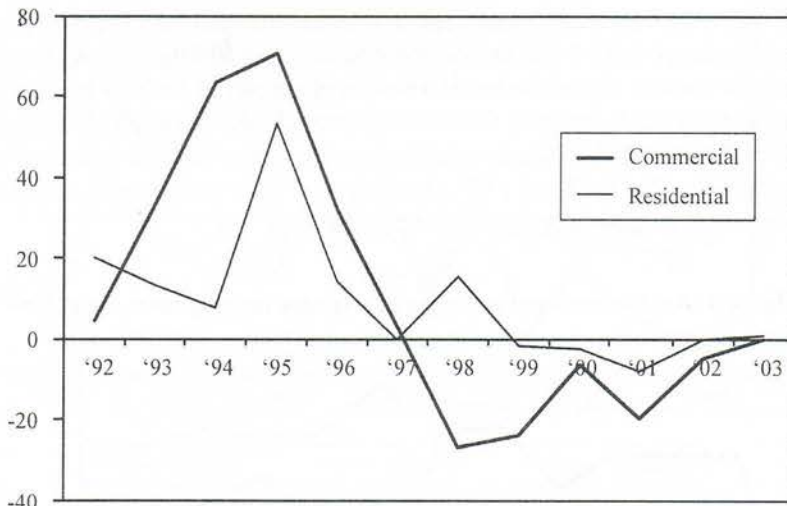
The growth in real estate prices as indicated by the property index peaked in 1996. The jump in the property stock index in 1996 followed the robust increases in commercial and residential prices at 71.2 percent and 53.4 percent, respectively, in 1995. (See Figure 2). It may be noted that commercial land values in Makati went up from P80,000 per square meter in 1991 to P425,000 in 1997 or by 431 percent, then declined in 1998 to P312,500, or by 26 percent, from the 1997 level.

In the months leading to the outbreak of the crisis in July 1997, the property index showed a downtrend amid investor fears of a property glut occurring in the country, similar to that observed in Thailand. The rise in commercial and residential property prices also posted a slowdown in 1996 and 1997, before declining in the succeeding years. It may be noted that commercial real estate prices posted more pronounced changes during the period than residential prices, indicating that business reacted more aggressively to market developments.

5.3. Impact on real economy

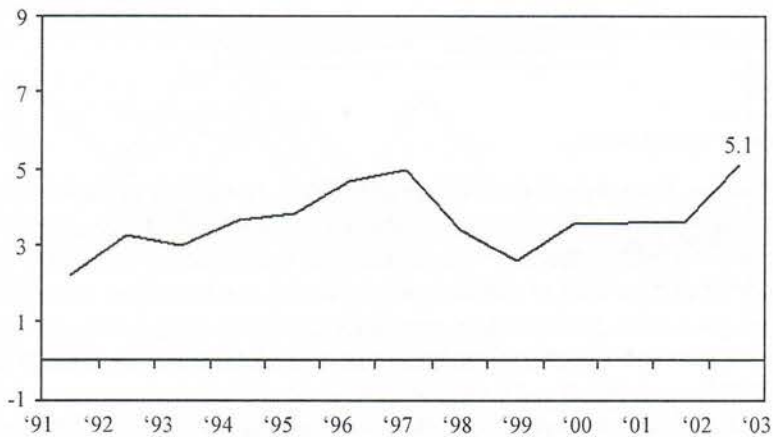
Marked fluctuations in asset prices can affect real output and prices through their impact on consumer spending and investments. Generally speaking, rising asset prices will stimulate consumer spending because (1) households' net capital expands; (2) a buoyant stock exchange climate and rising house prices usually boost consumer confidence; and (3) credit can be more readily available (Capel and Houben [1998]). In the Philippines, household spending broadly followed the movement in asset prices prior to, and after, the Asian crisis. (See Figure 3). However, it may be noted that despite the sharp downturn in equity and real estate prices, personal spending continued to post a positive growth. The single-digit inflation and overseas Filipino remittances probably contributed to the sustained increase in household spending.

Figure 2. Commercial and residential property prices*
(growth in percent)



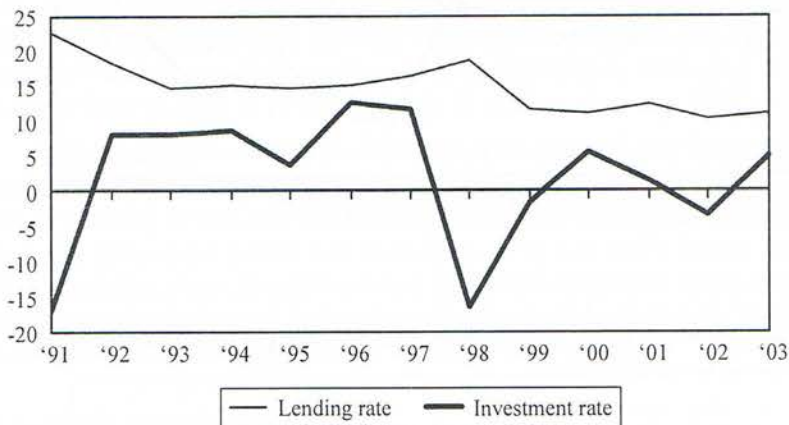
* commercial land values and residential capital values

Figure 3. Real personal consumption expenditure growth, in percent



Empirical research shows that equity prices play a limited role in investment decisions. Other factors such as the acceleration in business output and the cash flow of firms have often proven to be more important explanatory variables of capital spending than stock prices (Gramlich [2001]). Notwithstanding its limited role, equity prices could have an indirect effect on investments in the event of a stock market crash. The crash could impair consumer confidence and restrict bank lending, thereby limiting opportunities for business expansion (Capel and Houben [1998]). Loss of investor confidence, rise in interest rates, and the sharp depreciation of the peso dampened private sector investment in the Philippines. As shown in Figure 4, the country's gross domestic investment registered declines in 1998 (16.3 percent) and 1999 (2.0 percent). These slumps were due to the drop in private sector investment as indicated by the contraction in gross value added in construction by 7.5 and 9.8 percent in 1998 and 1999, respectively. Public construction, on the other hand, recorded increases during the same period.

Figure 4. Real investment growth and average lending rate, in percent



5.4. Impact on inflation

In general, property prices tend to lead inflation. In the case of the Philippines, inflation also followed a downward trend with the reversal in asset prices. (See Figure 5). A simple correlation test between commercial land prices or residential capital values (price of floor area of commercial/residential condominium space) and the consumer price index yielded a low correlation coefficient of 0.4 with commercial land prices and relatively high correlation coefficient of 0.8 with residential capital values; that is, asset prices and consumer prices seemed to move together, as shown in Figure 6. It may be noted that in the Consumer Price Index of the Philippines (a basis for the measure of headline inflation), the rentals component comprises a relatively significant weight of 13.7 percent.

Figure 5. PHISIX, property, and consumer price indices
(Annual percent growth)

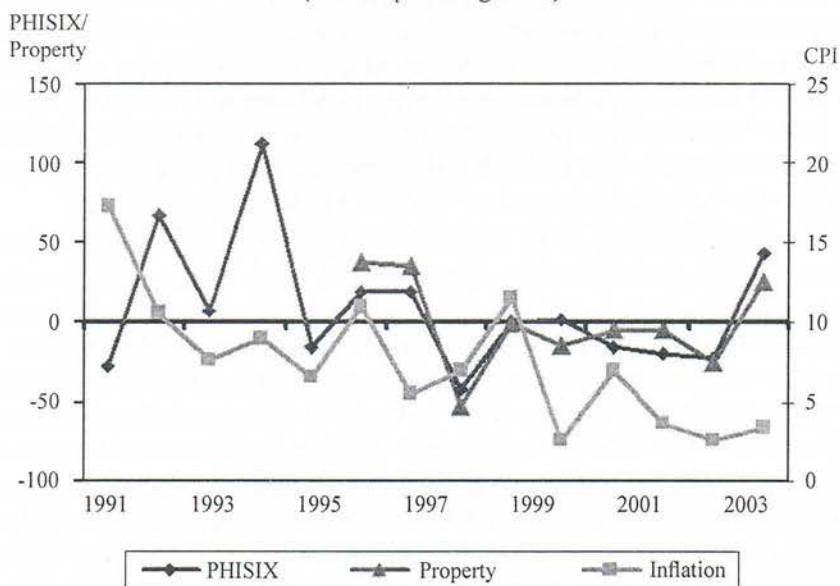
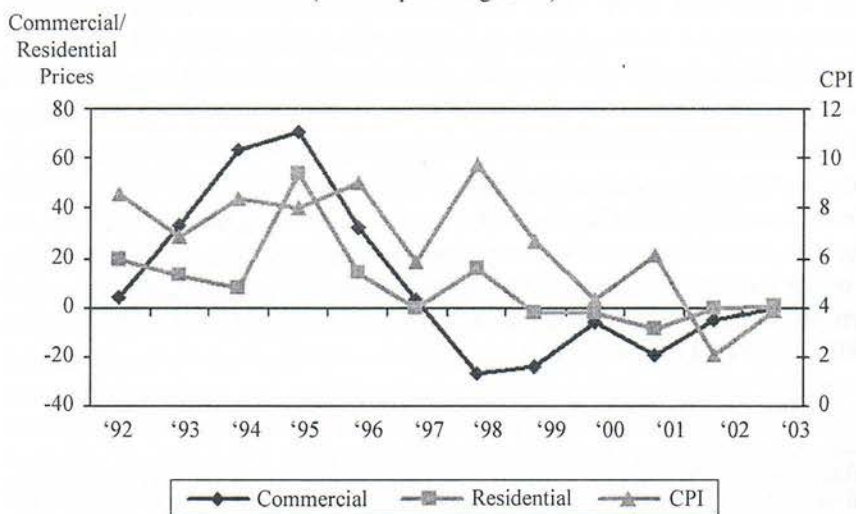


Figure 6. Commercial and residential prices, and consumer price index
(Annual percent growth)



5.5. Impact of asset price swings on the banking system and financial stability

Asset price swings can adversely affect banks' balance sheets in two ways—directly, if banks invested in equity and real estate, or indirectly, if in the previous boom period, the banks engaged in speculative lending on the assumption that equities and real estate will retain their value or increase in value over time (Capel and Houben [1998]). In the first case, a marked drop in stock and real prices will erode the market values of banks' investments in equities and real estate. In the latter, banks' loans lose their value as the contraction of economic activity impairs the repayment capacity of households and businesses, while at the same time the collateral—the loans liquidation value—decreases in value.

In the Philippine context, the impact of asset price swings could have been indirect considering the limited direct exposure of banks in equities and real estate. Trading account securities in shares of stock and equity investments in allied/non-allied undertakings comprised 2.72 percent of total assets both in 2000 and 2001.³ The ratio rose slightly to 2.9 percent in 2001 and remained at this level in 2002. Meanwhile, credit to the real estate sector stood at 11.55 percent of total loans as of September 2003, way below the 20 percent limit set by the BSP.

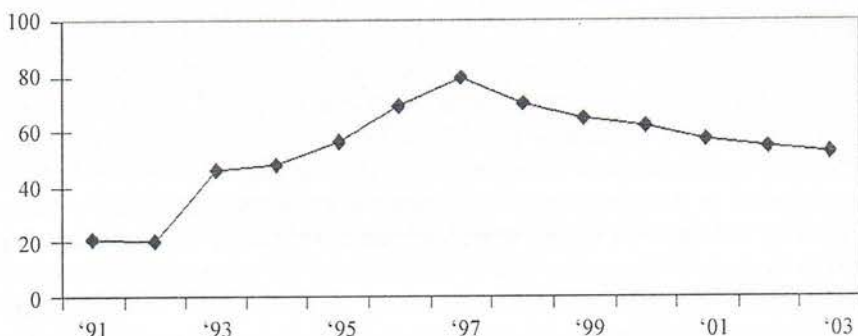
Lending by Philippine banks, as indicated by the ratio of net domestic credit to GDP, soared from 21.6 percent in 1991 to a high of 72.7 percent in 1997 before dropping to 64.8 percent in 1998. (See Figure 7). As of end-2003 the ratio was at 53.1 percent. The expansion in domestic credit was due mainly to the rise in credit to the private sector. Banks had relied on foreign liabilities, in addition to peso liabilities, to finance their credit operations. In 1996, the ratio of foreign liabilities to foreign assets of deposit money banks exceeded one percent, then rose to two percent in 1997 and 1998. Their foreign currency deposits (FCDs), meanwhile expanded rapidly by an average of 34.2 percent from 1991-1996.⁴ The relatively low foreign interest rates and the stable peso attracted substantial capital inflows during the period, driving the growth of foreign liabilities.

However, the growth in the country's foreign liabilities relative to foreign assets was not sustained as global private capital flows remained stagnant at a relatively low level from 1998-2002 (Institute of International Finance [January 2002]). In the Philippines, capital and financial accounts recorded outflows from 1999 to 2003. The ratio of foreign liabilities to total assets showed a declining trend, falling below 1.0 percent in 2002 and 2003. Similarly, FCDs dropped steadily from US\$14.5 billion in 1997 to US\$13.4 billion in 2003.

³Data series on trading accounts securities (TAS)-equity began only in 2000, after the Bangko Sentral required banks to include this in their 1999 reports submitted to the BSP. It is assumed that the ratio of equities traded/investment in equities did not significantly differ in the 1990s. Banks' trading/investments in financial instruments are relatively larger in government securities (7.6 percent and 10.3 percent of total assets in 2000 and 2001, respectively).

⁴Banks took advantage of the growth of foreign currency deposits as these are not subject to reserve requirements and the 20 percent tax imposed on interest income on peso deposits, while the tax on interest income on FCDs is at a lower rate of 7.5 percent.

Figure 7. Ratio of net domestic credits to GDP
(In percent)



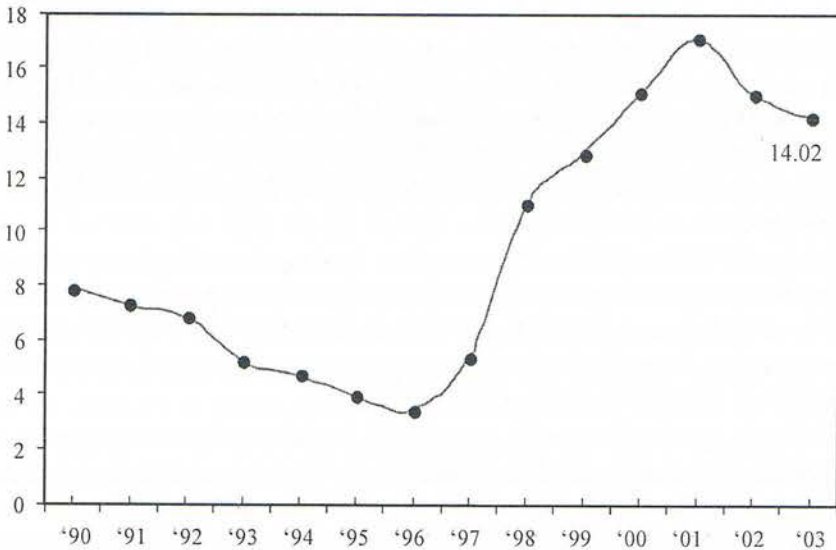
Econometric evidence supports the existence of a credit channel to asset price inflation in Asia. According to Collins and Senhadji [2002:13]: “Bank lending in the Asian economies has contributed to excessive asset price inflation, in particular in the real estate market, and the bursting of the bubble in this market contributed significantly to the financial crisis in Asia”. The property market plays a significant role since increases in real estate prices can raise banks’ capacity to lend. With banks’ heavy exposure to the property market, non-performing loans could rise if bubbles/ crises set in. Moreover, sharp depreciations in the exchange rate, which raise the peso value of foreign currency-denominated debt, could result in the deterioration of corporate and financial balance sheets. Banks could also suffer from heavy losses on loans to an over-leveraged corporate sector against real estate collateral which provided security of declining value.

Borio and Lowe [2002:14-5] emphasize that rapid credit growth (or rapid increase in asset prices or an investment boom), by itself, may pose little threat to the stability of the financial system. Based on past observations, it is the simultaneous occurrence of rapid credit growth, rapid increases in asset prices and, in some cases, high levels of investment, that is problematical.

Unlike in real estate bubbles where excessive bank lending to real estate could lead to financial instability, bubbles in the equity or the stock market have less effect on the health of the financial system. In the Philippine setting, this would likely be true since investment in stocks is not as leveraged as in the real estate. If the balance sheets of financial and non-financial institutions are not strong, however, then a stock market crash could lead to financial instability if lending to finance the acquisition of shares has expanded significantly. In cases when the financial system is strong, the effect of a stock market crash on the economy will operate through the wealth and cost of capital channels, requiring monetary policy to respond to the impact of the crash on aggregate demand or on inflation and output (Mishkin and White [2002:15]).

The adverse effect of banks' excessive lending (before the decline in asset prices) was reflected in the increase in the ratio of non-performing loans (NPL) to total since the Asian crisis. From 5.4 percent, the NPL ratio of banks rose steadily and peaked at 18.2 percent as of end-May 2002. (See Figure 8). The growth in the NPL ratio cannot be traced to the slump in the property sector as the exposure to the real estate sector stayed well within prudential limits. As of end-June 1997, banks' lending to the real estate industry accounted for only 12.3 percent of the total loan portfolio. The ratio has remained below 15 percent since 1997 and as of end-September was still at a low of 11.6 percent. In terms of past due accounts of commercial banks classified by industry, the largest share was accounted for by the manufacturing sector (35.8 percent) followed by the real estate sector (14.3 percent) as of the second semester 2001.⁵ The gradual deterioration in the asset quality of banks stemmed from a confluence of factors—the generally sluggish economic environment, the rise in interest rates, the weakening of the peso, and domestic political and peace and order concerns. The asset quality of banks improved gradually in 2003 as banks intensified their collection and foreclosure efforts.

Figure 8. Non-performing loans as a percent of total loans of the banking system

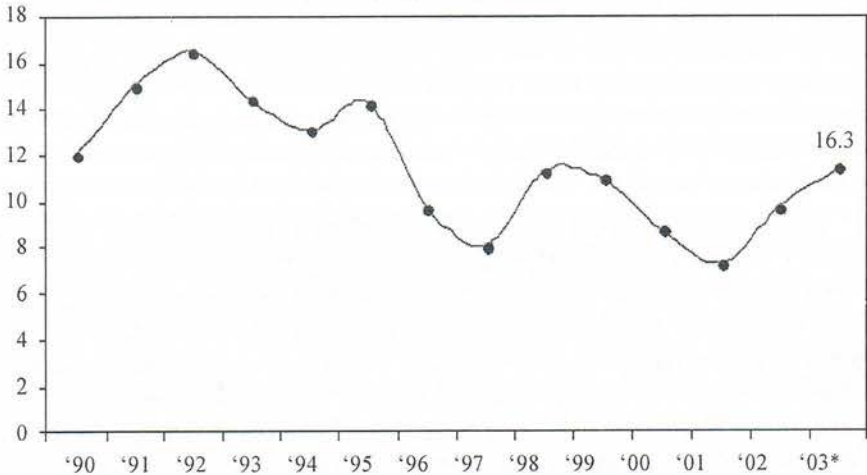


The capital adequacy ratio (CAR) of banks showed a steady drop from a high of 20.2 percent in 1992 to 16.3 percent as of June 2002 due in part to the increase in the NPLs of banks. (See Figure 9). This reflected in large part the higher expenses arising from increased loan loss provisioning. Notwithstanding the effect of the uptrend in the NPLs on the capital position of banks, the banking system's capitalization

⁵The NPLs of commercial banks were largely accounted for by major borrowers. Half of these past due accounts belonged to just 101 borrowers.

remained more than adequate relative to international norms and the statutory floor. The system's average CAR, using the old method of computation, rose from 16.1 percent at end-December 2001 to 16.5 percent as of May 2003. Using the new risk-based capital adequacy framework adopted in July 2001,⁶ universal and commercial banks' CAR reached 16.3 percent as of June 2003.⁷ This new ratio remains well above the BSP's 10.0 percent statutory floor and the Bank for International Settlements' (BIS) 8.0 percent standard.

Figure 9. Capital adequacy ratio of the banking system
(in percent)



*As of June 2003. Figures for 2002 and 2003 are for universal and commercial banks.

6. Monetary policy approaches to asset price fluctuations

With the realization that asset price bubbles create distortions in investment and consumption as well as adverse consequences on monetary and financial stability, including macroeconomic stability, how could monetary authorities cope with asset price bubbles or asset price misalignments?

The prevailing consensus is that "monetary policy should not target asset prices directly, but should respond to their effects on real economic activities and the general price level" (Shiratsuka [2000:1]). Under an inflation targeting framework, monetary policy should focus on the movements of prices of goods and services, not on asset prices. Monetary policy could react to a rapid rise in asset prices only

⁶Circular No. 280, dated 29 March 2001, approved the guidelines for the adoption of the risk-based capital adequacy ratio along the criteria prescribed by the Bank for International Settlements (BIS). This Circular was issued pursuant to Section 34 of the General Banking Law (GBL) of 2000, which gives the Monetary Board (MB) the authority to prescribe the minimum ratio that the net worth of a bank must bear to its total risk assets.

⁷Solo basis; computation excludes subsidiaries and affiliates of banks.

insofar as they affect inflation and inflationary expectations through the wealth effect. For instance, sharp swings in asset prices (property prices, equity prices, foreign exchange rate), could raise wealth and affect consumption/aggregate demand and feed on inflation. Policymakers could also be concerned with the impact of asset price bubbles on financial market stability in the bond, foreign exchange and money markets, and in the asset market itself.

The best safeguard against excessive volatility in asset prices would be a firm long-term commitment to fight inflation. Maintaining an environment conducive to sustainable economic growth is of prime importance and this includes price stability and financial system stability. Easy monetary policy can lead to easy credit and excessive inflation in asset markets and in markets for goods and services. It could also set the stage for higher and volatile interest rates, which lead to instability. However, monetary policy is not designed to contain booms and busts in asset prices, since monetary tightening that seeks to stabilize the asset market and attain financial stability may risk excessive deflation in the product market and lead to a slowdown in the real economy if the intervention is untimely (Borio et al. [1994:68]).

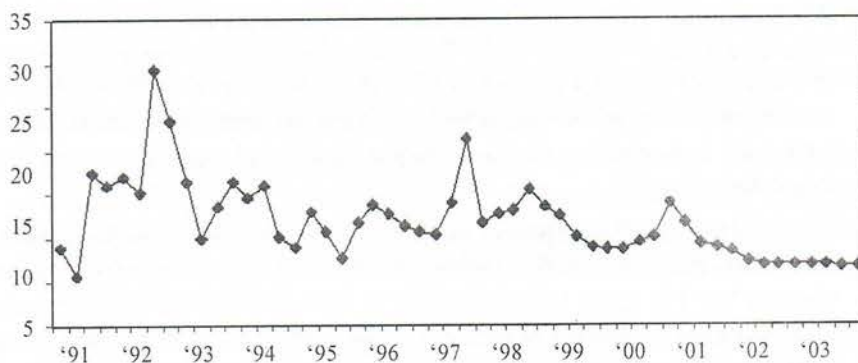
Cecchetti et al. [2002:1] argue that “an inflation targeting central bank might improve macroeconomic performance by reacting to asset price misalignments over and above the deviation of, say, a two-year ahead inflation forecast from target”. In addition to adjusting policy instruments to inflation forecasts and output gaps, reacting to asset price misalignments, which have no fundamental basis, will reduce the likelihood of asset price bubbles and of boom-bust investment cycles occurring. The authors suggest that interest rates be raised modestly as asset prices rise above what are estimated to be warranted levels, and interest rates be lowered modestly when asset prices fall below warranted levels. It is also possible to limit the proportion of banks’ loans for real estate/commercial property. These moves tend to offset the adverse impact on output and inflation of these bubbles, thereby enhancing macroeconomic stability. However, authorities are cautioned that a preemptive approach to volatile asset prices would render monetary policy too volatile, causing instability in financial markets. It would also be difficult to identify whether an asset price increase indicates a boom (productivity increase) or a bubble. Moreover, increasing interest rates is no guarantee that asset price increases would be arrested (Ito [2002:4]).

It is not so difficult for a central bank to deal with asset price inflation if price stability is clearly undermined. The central bank can conduct a preemptive policy response to contain an unwarranted rise in asset prices and high inflation in order to mitigate a severe and prolonged recession (output below potential) and price deflation. But as experience has shown, financial vulnerabilities can occur even under relatively low and stable inflation. Under such scenario, monetary authorities would find it difficult to adjust policy interest rates upward on the basis of potential risks accompanying asset price inflation even when there are no severe inflationary pressures (Ahuja et al. [2003:1]).

In the case of the Philippines, the monetary authorities may be able to mitigate the risks posed by asset price bubbles by increasing vigilance in periods of upswing in asset prices. Thus, monetary policy would have to be forward-looking by monitoring asset prices (e.g., stock prices, real estate and property prices, foreign exchange rate) because they contain incremental information about the macroeconomy. They could be indicators of expectations of inflation and output. Some supporting indicators include a narrowing output gap, which could be a warning signal, the expansion of money and credit, growth in investments, exchange rate, and the health of the financial institutions (Poenisch [2002:49]). Communication and moral suasion could also be relied upon to induce a soft landing. Therefore, there is a critical need for strong bank regulation and well-balanced macroeconomic policies in order to minimize the risks and disruptive costs associated with the development and burst of bubbles (Collins and Senhadji [2002:18]).

In the conduct of monetary policy, the objective is to take steps to insulate the financial system from the deleterious effects of asset price volatility, since movements in asset prices could create problems in the financial system, which in turn could adversely affect future output and inflation (Kent and Lowe [1997: 1]). Before and after the Asian crisis, inflation in the country was below the critical level of 10 percent. The Bangko Sentral ng Pilipinas (BSP) raised the overnight reverse repurchase rate (policy rate for borrowings of the BSP) to an average 21 percent during the third quarter 1997, not so much because of rising asset prices but more due to increasing inflationary expectations arising from the regional currency crisis. (See Figure 10). Policy rates have been on the downtrend since then in order to encourage investment and growth. The BSP has likewise implemented measures to strengthen the financial system by making them capable of withstanding shocks.

Figure 10. BSP overnight reverse repurchase rate
(Weighted average interest rate)



7. Extent of policy adjustments by bank supervisors in response to swings in asset prices

While banks' exposure to the property sector was manageable during the real estate boom in the first half of the 1990s, the BSP recognized the potential risks associated with the concentration of lending and investments in the real estate sector. In addition, growing concerns on the possibility of increased speculative activity in the real estate sector called for restraint on the part of banks in order to mitigate the impact of sudden reversals in the property sector on their balance sheets. Thus, in 1996, the BSP conducted studies on banks' exposure to the real estate sector and foreign exchange liabilities, which were generally viewed as the factors affecting movements in asset prices. The BSP also adopted the following prudential measures to ensure that credit exposure to the real estate sector stayed within manageable levels:

- 1) The BSP issued Circular Letter dated 5 June 1997 that limited banks' loans to the real estate sector to not more than 20 percent of a bank's total loan portfolio, exclusive of loans to finance the acquisition or improvement of residential units amounting to not more than P3.5 million. However, aggregate real estate loans, inclusive of such loans, should not exceed 30 percent of the bank's total loan portfolio.
- 2) Furthermore, the BSP directed commercial banks to reduce the loan value of the real estate used as collateral for bank loans to not more than 60 percent of the appraised value of the real estate property, exclusive of individual loans not exceeding P3.5 million.

Housing loans extended or guaranteed under the government's National Shelter Program (NSP), being non-risk assets, are exempted from these ceilings on the real estate loans.

While exposure to the property sector stayed within prescribed limits, banks' NPAs as a percent of total assets has grown markedly. Commercial banks' NPA ratio rose from 4.4 percent in 1997 to 9.0 percent in 1998, resulting in the adoption of measures that would guard against high credit risk-taking by banks and to ensure that they are adequately covered against potential loan loss defaults.

- 3) A general loan-loss (GLL) provision, over and above the provision for probable losses linked to individually-identified bad accounts, has been required under Circular No. 143 dated 1 October 1997. In 1998, banks were required to put up an additional 2 percent of their gross loan portfolio—less interbank loans, certain guaranteed loans which are not past due and those which are considered non-risk under existing laws/rules/regulations—as allowance for probable losses.⁸

⁸The BSP relaxed the GLL provision requirement to encourage growth in credit to the private sector. The amendment requires the application of the GLL provision only to loans as of the cut-off period of 31 March 1999 such that incremental loans granted over and above the loan portfolio level

- 4) The BSP further tightened the provisioning requirement (Circular No. 164 dated 13 April 1998, further amended by Circular 313 dated 27 December 2001) to include “loans especially mentioned”, regardless of collateral (5 percent), and secured loans classified as “substandard” (10-25 percent) among the specified loans subject to loan-loss provision, as shown below:

Table 1

<i>Loan Classification</i>	<i>Allowance</i>
Unclassified	0%
Loans especially mentioned	5%
Substandard	
Secured	10%
Unsecured	25%
Doubtful	50%
Loss	100%

- 5) Guidelines consistent with safe and sound banking practices were issued on the grant of loans and other credit accommodations (Circular No. 350 dated 10 September 2002).
- 6) The BSP tightened the rules and regulations on single borrowers’ limit (SBL) by limiting the total amount of loans, credit accommodations and guarantees that a bank may extend to any person, partnership, association, corporation or other entity to 25 percent of the bank’s net worth and an additional 10 percent on the condition that the additional liabilities are adequately secured by trust receipts, shipping documents, warehouse receipts or other similar documents transferring or securing title covering readily marketable, non-perishable goods, which must be fully covered by insurance (Circular No. 425 dated 25 March 2004). The SBLs have been strengthened to achieve more comprehensive coverage on a consolidated basis of bank exposure to related parties.
- 7) The BSP amended the rules governing banks’ dealings with their Directors, Officers, Stockholders and their Related Interests (DOSRI), stipulating that such transactions should be in the regular course of business and upon terms not less favorable to the bank than those offered to others (Circular No. 423 dated 15 March 2004).
- 8) Guidelines were issued on the conversion and transfer of foreign currency-denominated loans, and Real and Other Property Owned or Acquired (ROPOA) in the books of the Foreign Currency Deposit Unit (FCDU)/Expanded Foreign

of banks net of allowable exclusions as of 31 March 1999 shall no longer be subjected to loan loss provisioning.

Currency Deposit Unit (EFCDU) to peso loans and ROPOA in the books of the Regular Banking Unit (RBU), to prevent unhedged borrowers from incurring further foreign exchange losses arising from the continued weakening of the peso (Circular No. 420 dated 10 February 2004).

- 9) The BSP provided guidelines for the capital treatment of banks' investments in credit-linked notes (CLNs) and similar credit derivative products, such as credit-linked deposits (CLDs) and credit-linked loans (CLLs) (Circular No. 417 dated 28 January 2004).
- 10) Guidelines for managing large exposures and credit risk concentrations were released, in line with the BSP's objective of strengthening risk management in the banking system (Circular No. 414 dated 13 January 2004).

As commercial banks' NPA ratio increased further to 14.2 percent as of 2000, the need to address banks' NPAs was heightened. In this regard, the BSP supported the enactment into law of the Special Purpose Vehicle Act (SPVA) of 2002 on 23 December 2002. The SPVA was expected to hasten the removal of banks' NPAs from their balance sheets by granting fiscal incentives. On 19 March 2003, the implementing rules and regulations of the SPVA were approved. To set in motion the implementation of the law, the BSP undertook the following actions:

- Drew up a master registry of NPAs eligible for transfer/sale under the SPVA for the smooth verification and clearance of banks' NPA dispositions on true sale basis;
- Approved procedures for banks and non-bank quasi-banks intending to transfer/sell their NPAs to an individual that involves a single family residential unit, or transactions involving *dacion en pago* by the borrower or third party of an NPL, for the purpose of obtaining the Certificate of Eligibility (COE), which is a requirement to avail of the incentives provided under the SPVA (17 June 2003); and
- Issued accounting guidelines on the treatment of the sale of npas by banks and financial institutions under bsp supervision (26 September 2003 and 16 February 2004).

During the early stages of the SPVA implementation, the disposition of bad assets had been slow. However, there are indications that the progress of banks' NPA sale could be picking up. Approximately P100 billion worth of NPAs is expected to be disposed within the next few months. Banks, meanwhile, have been actively pursuing the sale of their acquired assets, particularly single family residential units to individuals and the settlement of NPLs by *dacion* of properties. These transactions are also entitled to the same tax relief and reduced fees under the law.

8. Conclusion

Marked fluctuations in asset prices were observed in the Philippines in the years leading to, and after, the Asian financial crisis in 1997. The extent of their effects on the real economy and the banking system has yet to be quantified, but data showed that real aggregates, such as household consumption and investments as well as inflation, broadly moved in tandem with asset price changes. Meanwhile, indicators showed that the direct effect of asset price swings on banks' financial condition was limited due to the relatively low exposure of banks to equities and the real estate sector. Nonetheless, the indirect impact through the loss of consumer and business confidence, which accompanied and followed the drop in asset prices, was reflected in the steady weakening of the asset quality and capital-adequacy ratio of banks.

On the part of the monetary authorities, the rise in policy interest rates and market interest rates at the time of the Asian crisis was more a reaction to the deterioration in economic environment rather than a reflection of the need to artificially control the high asset prices. Recognizing the adverse effects of abnormally high asset prices on the real sector and the banking system, monetary authorities, as early as 1995, included the monitoring of asset price changes in their monetary policy framework. The BSP also adopted prudential measures to cap banks' lending to the real estate sector.

It is difficult to ascertain the existence of asset price bubbles. It is even more difficult to determine the right magnitude of interest rate to burst the bubble. For this reason, monetary policy need not be preemptive during the boom period. Raising interest rates too soon could precipitate an asset price collapse with its adverse effects on financial markets, the financial system and eventually a protracted fall in output below its potential and inflation below its target. Whatever the monetary approach that may be adopted, the best safeguard against asset price fluctuations is for monetary authorities to foster an environment conducive to sustainable economic growth, which includes price stability and financial system stability.

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