

## Chapter 1 : Try FT for free | Financial Times

*The relation between asset prices and banking distress was at the heart of numerous financial crises. The Nordic banking crises of the early s constitute an important case in point.*

Monetary policy and asset prices Governor Donald L. Kohn At "Monetary Policy: I have known and admired Otmar for some time. It has been a source of great pride that he has considered me a worthy intellectual sparing partner over the years. From the hiking trails of Jackson Hole to the restaurants of Frankfurt and at many conferences in between, we have challenged each other to state our assumptions, examine the evidence, and adjust our conclusions accordingly. I have derived enormous benefit from that give-and-take--a sentiment, I am sure, that many others in this room share. I can think of no better way to celebrate the signal contributions of this leading force in the world of monetary policymaking than to address an issue of great importance to central banks, and one that has drawn considerable public attention and comment of late--namely, the proper role of asset prices in the determination of monetary policy. Otmar and I have debated this issue on many occasions, and these discussions--together with recent research carried out at the European Central Bank, the Bank for International Settlements, and elsewhere--have been both challenging and stimulating. The preparation of this talk has afforded me a welcome opportunity to reexamine my thinking on this subject. So, today, I will review the arguments and the evidence as I see them and draw out the conclusions to which I am currently led. At the outset, let me stress that I will be expressing my own opinions, which are not necessarily shared by my colleagues on the Federal Open Market Committee. But many argue that pronounced booms and busts in asset markets are another matter, especially if actual valuations appear to be misaligned with fundamentals. What should a central bank do when it suspects it faces a major speculative event--one that might be large enough to threaten economic stability when it unwinds? To help frame the discussion, I will focus on two different strategies that have been proposed for dealing with market bubbles. The first approach--which I will label the conventional strategy--calls for central banks to focus exclusively on the stability of prices and economic activity over the next several years. Under this policy, a central bank responds to stock prices, home values, and other asset prices only insofar as they have implications for future output and inflation over the medium term. Importantly, the strategy eschews any attempt to influence the speculative component of asset prices, treating any perceived mis-pricing as, rightly or wrongly, an essentially exogenous process. Following this strategy does not imply that policymakers ignore the expected future evolution of speculative activity. If policymakers suspect that a bubble is likely, say, to expand for a time before collapsing, the implications of that possibility for future output and inflation need to be folded into their deliberations. Practically speaking, however, I view our ability to act on such suspicions as limited given how little we know about the dynamics of speculative episodes. Despite its approach to perceived speculative activity, the conventional strategy does recognize that monetary policy has an important influence on asset prices--indeed, this influence is at the heart of the transmission of policy decisions to real activity and inflation. It occurs through standard arbitrage channels, such as the link between interest rates and the discount factor used to value expected future earnings. The second strategy, by comparison, is more activist and attempts to damp speculative activity directly. I quote from the article: The central bank would adopt a somewhat tighter policy stance in the face of an inflating asset market than it would otherwise allow if confronted with a similar macroeconomic outlook under more normal market conditions. It would thus possibly tolerate a certain deviation from its price stability objective in the shorter term in exchange for enhanced prospects of preserving price and economic stability in the future. Thus, the strategy seeks to trade off the near-certainty of worse macroeconomic performance today for the chance of disproportionately better performance in the future, on the theory that the repercussions of a major market correction could be highly nonlinear. But the extra-action proposal is by no means a bold call for central banks to prick market bubbles. As the ECB article stresses, such an attempt would be extremely dangerous given the risk that a concerted effort at stamping out a speculative boom would lead to outsized interest rate hikes and recession. Rather, the extra-action strategy is intended only to provide some limited insurance against the possibility of highly

adverse events occurring down the road. Common Ground I will be talking at length about the differences between the two strategies, but I must stress up front how much they have in common. Both policies aim to achieve the same general objectives of monetary policy, using the same broad analytic framework. Most central banks, I believe, share these basic features of monetary policymaking, notwithstanding important differences in their official mandates and the nature of their economies. At the risk of considerable oversimplification, policymakers can be described as seeking to set policy over time so as to minimize the present value of future deviations of output from potential and inflation from a desired level. This statement is true whether our institutions have a specific mandate to keep inflation low and stable and output close to potential, as in the United States, or whether our mandate is defined primarily in terms of stabilizing inflation, as in the euro area. Stabilizing output complements maintaining price stability in the medium to long run, and often in the short run as well. We also can agree that asset prices play critical and complicated roles in determining real activity and inflation--roles that may be changing over time because an increasing share of wealth is market-determined and easily liquified. Movements in stock prices and real estate values affect household wealth and thus consumer spending. Changes in bond prices, stock prices, and exchange rates imply movements in the cost of capital and relative prices that influence investment and foreign trade; exchange rate movements also directly affect the prices of goods and services. Finally, asset prices can affect the value of collateral and thus the provision of credit, thereby influencing aggregate spending. In cases of sharply falling market valuations, these adverse credit-channel effects may even be exacerbated by the deteriorating health of banks and other financial institutions. In sum, asset prices influence the economy in complex and subtle ways over potentially extended periods of time. Finally, I think it fair to say that most central banks, faced with only a limited understanding of asset prices and their interactions with the full economy, engage in a form of risk management when dealing with market booms and busts. In part, they do this because any particular policy under consideration is never associated with a single forecast for the future paths of output and inflation but, instead, with a large set of possible scenarios with differing odds of coming to pass. While no one uses formal Bayesian methods to solve this difficult problem, I think most policymakers do engage in at least an informal weighing of the various possibilities and their implications when setting policy. Three Conditions for Extra Action to Lead to Better Outcomes Now let me turn from areas of agreement to more contentious issues, ones that have a strong bearing on the relative merits of the two strategies. As the ECB article notes, extra action is often seen as a type of insurance. And as with any insurance policy, before you buy you have to ask whether the expected benefits outweigh the costs. As I see it, extra action pays only if three tough conditions are met. First, policymakers must be able to identify bubbles in a timely fashion with reasonable confidence. Second, there must be a fairly high probability that a modestly tighter policy will help to check the further expansion of speculative activity. And finally, the expected improvement in future economic performance that would result from a less expansive bubble must be sizable. You may be thinking that, in stating the three conditions, I have slanted the case with such phrases as "reasonable confidence" and "fairly high probability. For the moment, let me set aside the first condition and assume that central banks can distinguish an emerging bubble from improving fundamentals at an early stage. What about the other two conditions? Should we presume that a limited application of restrictive policy would materially restrain the speculative boom and make its eventual unwinding less disruptive for the overall economy? The boom was fueled by a sustained acceleration of productivity and an accompanying rise in corporate profits--fundamental changes that justified a major rise in equity prices. How high those prices should have risen was difficult to judge in real time because no one, not investors or central bankers, could be sure how fast profits would grow in the future. In the event, share prices increased more than was justified by improved fundamentals. But overly optimistic expectations for long-run earnings growth were not being driven by easy money, and I see no reason to believe that an extra 50 or even basis points on the funds rate would have had much of a damping effect on investor beliefs in the potential profitability of emerging technologies. At present, we just do not have any empirical evidence of a link between interest rates and corporate equity valuation errors, as opposed to standard arbitrage effects. In general, we have a very poor understanding of the forces driving speculative bubbles and the role played by monetary policy. In fact, we

cannot rule out perverse effects. When the FOMC tightened in and early , the trajectory of stock prices actually steepened, and equity premiums fell--perhaps because investors became more confident that good macroeconomic performance would be sustained. Since mid, we have seen a marked decline in bond-term premiums, even as the funds rate has risen steadily. These episodes illustrate that risk premiums often move in mysterious ways, and we should not count on the ability of monetary policy to nudge them in the intended direction. Perhaps housing markets differ from equity and bond markets. For example, homeowners, who may have a less sophisticated understanding of the economy than professional investors, might mistakenly view a one-time rise in home prices--resulting, say, from a decline in interest rates--as evidence of a more persistent upward trend. If so, a monetary easing directed at stabilizing output and inflation might, conceivably, drive up real estate values by more than fundamentals alone would merit. Still, you would expect any mis-pricing from these sources to be reversed over time as interest rates returned to normal. In any event, empirical evidence on this issue is scanty. More broadly, further research into the causal connections, if any, between monetary policy and bubbles would seem to be needed before we would know enough to be able to act on such linkages with much confidence. Even then, with the second condition now met, the third condition might not hold: To explain this statement, I note again that extra action with near-certainty weakens the economy and reduces inflation before the bubble bursts in exchange for the chance of better macroeconomic performance in the future. Admittedly, if the worst-outcome scenario associated with an unchecked bubble is judged sufficiently dire and if the scenario is not seen as too improbable, then a risk-averse policymaker might regard the expected return from extra action insurance as worth its upfront cost. However, our confidence in such an assessment would seem to hinge on believing that the effects of market corrections could be markedly nonlinear. Proponents of extra action often cite an increased risk of severe financial distress as a potential source of such effects. However, without the onset of deflation, how large is this risk? In recent history, the health of the U. Moreover, the financial sectors of most other developed economies also weathered the worldwide drop in corporate equity values fairly well. Of course, the nonlinear risks associated with a collapsing bubble may depend on the initial health of the financial system, and under some circumstances we could be worried about the potential for significant financial distress to accompany the bursting of a bubble, should that bubble expand further. Even in such cases, however, I wonder whether good prudential supervision in advance and prompt action to clean up any lingering structural problems afterward would not be better ways to deal with this possibility. Certainly, closer oversight of banking systems during the s, including the United States, would have left many economies in a stronger position during the early s. This lesson has been absorbed by supervisory authorities around the world, as evidenced by our successful efforts to strengthen bank capital and our financial systems. I do agree that market corrections can have profoundly adverse consequences if they lead to deflation, as illustrated by the United States after the stock market crash and the more recent experience of Japan. But it does not follow that conventional monetary policy cannot adequately deal with the threat of deflation by expeditiously mopping up after the bubble collapses. In Japan, deflation could probably have been avoided if the initial monetary response to the slump in real estate and stock market values had been more aggressive; in addition, macroeconomic performance would have been better if the government had dealt more promptly with the structural problems of the banking sector. By doing so, policymakers should be able to avoid the severe nonlinear dynamics of deflation. Proponents of extra action often argue that it should reduce the risk of hitting the zero bound, but we should recognize that under some circumstances extra action may actually exacerbate the problem. To see this, suppose that a speculative bubble has emerged and that a central bank, operating under a conventional strategy, has raised interest rates to keep the projected output gap closed and expected inflation at its desired level before the bubble bursts. Now the central bank contemplates taking extra action. In a low-inflation environment, such a step would be a bad idea if, after averaging across all the possible outcomes weighted by their likelihoods, the predicted moderation in the bubble from tighter policy is small. In this case, the expected weakening in real activity after the bubble bursts would be only marginally less severe under extra action, but inflation would be substantially lower because the extra action policy would have generated persistent economic slack beforehand. With inflation having already started out at a low level, such a decline would be extremely dangerous because the

zero bound would now be much more likely to constrain monetary policy after the bubble bursts. Under these conditions, extra action would therefore worsen expected economic performance, not improve it. Another purported benefit of extra action is that, by raising the cost of capital to firms and households, it helps reduce overinvestment fostered during speculative booms, thereby making it easier for the economy to recover after the bubble collapses. However, we should be careful not to exaggerate the macroeconomic importance of such capital mis-allocation. But it is hard to see much of a cost in terms of diminished aggregate productivity, given the robust growth of output per hour over the past few years. Furthermore, even if tighter monetary policy would have damped the enthusiasm for dot-com firms in the late s, higher interest rates would have also led to less housing and less business investment outside the high-tech sector, where valuations were not obviously out of line with fundamentals.

**Chapter 2 : India less vulnerable to banking distress risks than China: BIS - Livemint**

*This paper links banking with asset prices in a monetary macroeconomic model. The main innovation is to consider how falling asset prices affect the banking system through wide-spread borrower default, while deriving explicit solutions and balance sheet effects even far from the steady state. We.*

During the past decade, asset markets have played an increasingly important role in many economies, and fluctuations in asset prices have become an increasingly important factor for policymakers. Indeed, movements in exchange rates, equity values, and prices for real assets such as housing and real estate, have each been, at various times, the focus of keen interest at central banks. In a variety of situations, central banks have questioned how they should respond to fluctuations in asset prices. The six papers presented at this conference provide some first steps in understanding what central banks can and should do with regard to asset prices. The papers are listed at the end and are available at [http://www.bis.org/publ/other/asset\\_prices.htm](http://www.bis.org/publ/other/asset_prices.htm). The papers by Stock and Watson and by Goodhart and Hofmann provide analyses of the forecasting ability of asset prices for inflation and output. As a whole, their conclusions are cautionary, even skeptical, regarding the ability of individual asset prices to consistently forecast well. However, both papers are more optimistic about the ability of combinations of asset prices—composite financial indexes or weighted averages—to produce useful forecasts. Both papers consider the appropriate response of central banks to movements in foreign exchange rates. The first paper examines the success of monetary policy rules when there is uncertainty about what determines exchange rates and provides an important contribution to the literature on robust monetary policy rules. The second paper focuses on whether the exchange rate adds information to a policy rule that responds to inflation forecasts. Both papers suggest a fairly limited policy reaction to exchange rate movements. The paper by Gertler, Gilchrist, and Natalucci explores the interaction between financial distress—“weakening asset prices and tightening financial conditions”—and the exchange rate regime. Under fixed exchange rates, this paper shows that the central bank has great difficulty in adjusting interest rates to alleviate the financial distress and stabilize the economy. Finally, the paper by McCallum considers whether the liquidity trap, in which nominal interest rates have been lowered to their absolute minimum of zero, is a problem of practical importance. The paper emphasizes that even with the interest rate policy instrument immobilized by a liquidity trap, an exchange rate channel may still be available to the central bank to stabilize the economy.

Forecasting output and inflation: To set the stage for this analysis, the authors first provide a survey of 66 previous papers on this subject. Much of this previous research is contradictory, with an initial series of papers identifying a potent predictive relation, which is subsequently found to break down in the same country or not to be present in other countries. Based on this literature review, Stock and Watson argue that many of the purported empirical forecasting relationships are ephemeral. However, the most robust and convincing evidence indicates that the spread between long-term and short-term interest rates usually predicts real economic activity. The authors go on to conduct their own econometric analysis of the practical value of asset prices as predictors of real economic activity and inflation. Their empirical results are consistent with their review of the literature: Certain individual asset prices have predictive content for output growth in some countries during certain periods. The uncertainty and instability of these informational relationships make it unlikely that they can be exploited. Furthermore, the evidence is even weaker that asset prices can forecast inflation. An exception to these pessimistic results is that Stock and Watson find that combining information from a large number of asset prices does seem to result in reliable forecast accuracy improvements. They argue that this is a promising avenue for future research. Asset prices, financial conditions, and the transmission of monetary policy

Goodhart and Hofmann also examine the amount of information in asset prices for forecasting future economic activity and inflation. Such MCIs have been used as summary measures of the stance of monetary policy because both higher interest rates and higher exchange rates reduce real demand and affect the prospects for future inflation. Goodhart and Hofmann consider whether an MCI could be usefully broadened to an FCI that also includes the real prices of housing and equities. These additional asset prices are thought to be important determinants of the wealth effect on consumption and so might provide useful information on

future aggregate demand. The authors construct FCIs for each of the G7 economies, with component weights chosen to maximize the performance of the indexes in explaining the output gap. This analysis is done with both a small structural model and a nonstructural model. The resulting indexes are then evaluated on how well they predict inflation. The authors find that while the indexes tend to lead inflation, they did not clearly out-perform a simple alternative model in an out-of-sample inflation forecasting exercise. In an open economy, movements in the exchange rate have several important effects. First, an increase in the real exchange rate boosts the demand for domestic goods as foreign goods become relatively more expensive. Therefore, it seems possible that the exchange rate could serve as a useful indicator of policy. This reasoning also underlies some of the popularity of the MCIs described above. Unfortunately, movements in the exchange rate are not very well understood in practice. In particular, the main theories of exchange rate determination—namely, the parity conditions that link prices of tradeable goods and interest rates across countries—do not have much empirical support. Thus, there is a high degree of uncertainty about how exchange rates will react to changes in monetary policy or other economic factors. This paper allows for exchange rate uncertainty by considering four different models of exchange rate determination. The paper examines how a policy rule developed assuming one exchange rate process performs in stabilizing the economy when exchange rates are actually set by another process. The authors find that policy rules that include the exchange rate are less robust to this form of model uncertainty than other rules. In particular, a Taylor rule, which includes a response to the output gap and inflation, stabilizes the economy, in general, better than a Taylor rule augmented with the exchange rate. See Dennis for further discussion. Monetary policy rules for an open economy The Batini, Harrison, and Millard paper also examines the properties of various optimal simple rules in an open economy model. Their model is richer than most in the literature as it contains both a tradeable and a non-tradeable good. The presence of these two sectors generates asymmetric effects because the traded good is more sensitive to exchange rate movements than the non-traded good. The analysis also considers a larger set of possible monetary policy rules than most research. Among the rules analyzed are some developed for closed economies and some open-economy rules with an explicit exchange rate response. The authors favor a rule in which the interest rate is set in response to deviations of expected future inflation from an inflation target. Adding a separate exchange rate response to this rule provides only a marginal improvement in performance. In essence, entrepreneurs borrowing from a bank pay a risk premium that varies inversely with their net worth, so the cost of finance increases as the entrepreneur becomes more leveraged. In the aggregate, a drop in asset prices will reduce net worth, which boosts the financing premium and magnifies the effects of the asset price shock on the economy. To demonstrate the role of this mechanism in their open economy model, the authors carry out a series of exercises. First they consider an increase in foreign interest rates. When the domestic central bank is enforcing a fixed exchange rate, it is forced to raise domestic nominal and real interest rates in response. As a consequence, investment and output both fall. In contrast, when exchange rates are flexible, domestic interest rates do not have to go up as much because the domestic currency is allowed to depreciate, which mitigates the fall in domestic investment and output. Such a difference in outcomes under fixed and flexible exchange rate regimes would emerge even in a model without a financial accelerator. However, the authors show that the presence of the financial accelerator magnifies the declines in the real economy under fixed exchange rates. Inflation targeting and the liquidity trap The McCallum paper considers a variety of theoretical and empirical issues regarding the liquidity trap, which occurs during a persistent deflation when nominal short-term interest rates fall to their zero lower bound. In these circumstances, the central bank is in a liquidity trap because it can no longer ease policy by lowering interest rates see Hutchison McCallum argues that a liquidity trap is unlikely to be a very common or insurmountable problem. As a general theoretical issue, he notes that the liquidity trap in many models would not occur if agents were partially or boundedly rational and constructed their forecasts of inflation using sensible algorithms. In particular, if the agents learn from past data, they will not encounter a liquidity trap. However, in the real world, as a practical matter, even if a liquidity trap were encountered, McCallum argues that the central bank would not be powerless to defuse it. Although the usual interest rate channel to stimulate the economy is immobilized, monetary policy may still be potent because of the existence of a transmission

channel involving foreign exchange. Indeed, the author proposes that a central bank could stimulate recovery from the liquidity trap by using base money to purchase foreign currency and thereby depreciate the home currency and raise net exports. This type of policy will not work if the exchange rate is governed by the interest rate parity condition discussed above. However, the author notes that this condition has weak support in the data and in theory. Goodhart, Charles, and Boris Hofmann. *The Role of Asset Prices. Is the Liquidity Trap Back?* University of Chicago Press. This publication is edited by Sam Zuckerman and Anita Todd. Permission to reprint must be obtained in writing.

**Chapter 3 : Distressed Securities**

*This paper links banking with asset prices in a monetary macroeconomic model. The main innovation is to consider how falling asset prices affect the banking system through wide-spread borrower default, while deriving explicit solutions and balance sheet effects even far from the steady state.*

Introduction[ edit ] Policymakers should have a good understanding of how monetary policies transmit from a monetary tool into the goal. In order for monetary policies to have the desired effects on the economy policymakers should have an accurate assessment of the effects and timing of their policies. This is what the monetary transmission mechanism describes. There are several different channels through which a monetary policy can pass-through the economy. There are three other categories of asset prices besides those on debt instruments that are regarded as critical channels through which monetary policy affects the economy. These are 1 stock market prices, 2 exchange rates and 3 real estate prices. Changes in these asset prices affect investment and consumption decisions of both firms and households and therefore central banks often use it as an instrument of monetary policy. Stock price channel[ edit ] Fluctuations in the stock market have important impacts on the economy, so also when influenced by Central Bank monetary policies. Transmission mechanisms involving the stock market have their results on the economy in three different ways. Firstly through their effects on investment in the stock market, for which stock prices are a determining factor. Under these circumstances, firms can issue stocks and get a high price for it, relatively to what it costs to buy the facilities and equipment that they need. As a result, investment spending will rise and firms buy this new equipment with only a small issue of stocks. Expansionary monetary policy a lower interest rate make stocks relatively more attractive than bonds. More demand for stocks will generally tend to drive up their prices. As was explained above, this raises the level of investment spending of firms, thereby leading to an increase in aggregate demand and a rise in output. This process can be described by the following schematic: Alternatively, the effects of expansionary monetary policy can also be described as higher stock prices again leading to more funds lower the costs of capital financing with stocks instead of bonds makes investment cheaper , and will rise both demand and aggregate output. It can be argued by the same logic that the opposite holds for contractionary monetary policy. When the stock price of a company increases, also the net worth of a company increases. Lending to companies with a lower net worth is more risky because these companies generally have less collateral and so the changes of potential losses are higher. This increases the risk of moral hazard and adverse selection problems for firms with a lower net worth. Therefore, a decline in net worth increases moral hazard and adverse selection problems and may lead to less lending to finance investment spending. Expansionary policy rises the stock prices of the firm, which increases the net worth of the company. This decreased problems of moral hazard and adverse selection which means that funds to finance investments can rise. This again leads to a higher output of the economy. In general, durable products and housing are very illiquid assets because of asymmetric information information on their quality can be very non-transparent. Consumers will then be less reluctant to purchase durable products and spend on residential and housing assets. This will again have a positive on aggregate demand and the output of the economy. Similarly, it can be argued that when expansionary policy rises the stock prices, it automatically also rises the value of the financial wealth of a household and consumption will increase. Expansionary monetary policy will cause the interest rate in a country to fall and deposits that are denominated in that domestic currency become less attractive than their foreign equivalents. As a result, the value of domestic deposits will fall compared to foreign deposits, which leads to a depreciation of the domestic currency. As a result of this depreciation domestic products become cheaper , net exports will rise and consequently so will aggregate spending. Exchange rate effects on balance sheets[ edit ] When countries have debt denominated in foreign currencies, the burden of their financial debt will rise when an expansionary monetary policy is implemented. The same reason in as in the previous section applies. The domestic currency will depreciate against the foreign currency and this will increase the amount of foreign currency needed to pay the debt and the debt burden increases. However, assets that are debt-financed are generally denoted in the domestic currency, and

thus their value does not increase with expansionary policy, but rather decreases the net worth compared to foreign currency. This again increases the problems of moral hazard and adverse selection and therefore will drive the amount of funds available through lending down. As a result, investment spending and accordingly aggregate spending will decrease. Real estate price channel[ edit ] Another important asset besides stocks that should therefore also be considered as an important transmission channel is real estate. Real estate prices can affect the output of an economy via three different routes: With equal house prices, houses become relatively more expensive and the construction of new houses  $H$  becomes more attractive. As a result, housing expenditures such as the construction of new houses will increase and so aggregate demand will rise. The amount of financial wealth of a household directly affects the amount of spending. This will have a positive effect on consumption and spending behavior. The role of asset prices in monetary policy[ edit ] Developed countries[ edit ] Developed countries experience an increasing level of market integration and therefore the asset price channel becomes increasingly important in the transmission of monetary policy into the economy. The effects of monetary policies depend on other countries, and we have seen that a mechanism such as the exchange rate also depends on other assets. However, despite the significance of asset prices in the conduct of monetary policy, economic outcomes might be worse when central banks try to target asset prices because this erodes the support for their independence. As a result, less funds will be available and investment will fall, and so will aggregate expenditure. Depreciation in emerging markets, when acting contractionary, are dangerous because they can trigger a financial crisis.

### Chapter 4 : Asset prices and banking distress: a macroeconomic approach

*This paper links banking with asset prices in a dynamic macroeconomic model, to provide a simple characterization of financial instability. In contrast with historical bank runs, recent banking crises were driven by deteriorating bank assets.*

### Chapter 5 : Asset price channel - Wikipedia

*This paper links banking with asset prices in a monetary macroeconomic model. The main innovation is to consider how falling asset prices affect the banking system through wide-spread borrower.*

### Chapter 6 : Monetary transmission mechanism - Wikipedia

*This paper links banking with asset prices in a dynamic macroeconomic model, to provide a simple characterization of financial instability. In contrast with historical bank runs, recent banking.*

### Chapter 7 : Federal Reserve Bank of San Francisco | Asset Prices, Exchange Rates, and Monetary Policy

*Some recent studies have found that there is a positive relationship between asset price inflation and occurrences of banking distress. <sup>16</sup> To capture this, we introduce two explanatory variables, the property price gap (PPG) and stock price gap (SPG). The gaps are measured by the difference between prevailing asset prices and their trends.*

### Chapter 8 : The Fed - Monetary policy and asset prices

*and companies, asset price bubbles, credit growth, and the occurrence of distress of other economies in the region are found to be important leading indicators of banking distress in the home economy.*

### Chapter 9 : Financial Distress

*Financial Distress in Large Financial Institutions One factor contributing to the financial crisis of was the government's history of emergency loans to distressed financial.*