An economic policy for stable, sustainable, development

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Developing economic rules to harness market forces for the common good

This discussion paper presents Höglund's Interest rate rule: a new paradigm within the field of macroeconomics. It suggests practical methods to maintain an optimally strong, environmentally compliant and genuinely sustainable, employment-conducive demand in the economy.

An economic policy for stable, sustainable, development

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Introduction

This paper contains a simplified description of a method to stabilize real estate markets and financial systems, to prevent recessions and depressions and to create a fair and genuinely sustainable development and growth. The method includes the utilization of a (budget-neutral) economic reward system securing a sufficiently strong and sustainable demand in the economy. The basic principle of the method is that the rules in the economic system should be designed to make private interest coincide with common interest and private good with common good.

Throughout history "conventional" economic policy, well represented and described in the literature in the reference list below, has over and over again failed to maintain the stability of the economic system by gravely ignoring obvious economic facts and well-known human behaviors.

Every financial expense is also a financial income and every financial debt is also a financial asset, by definition. Furthermore, the number of possible "beneficial" work tasks is unlimited while financial assets are symbols that can be created at will in sufficient amount to pay for all work that can be done. Finally, there is no law of nature preventing the introduction of rules that effectively stabilize the behavior of the economic system. These basic facts ought to be sufficient for a radical reassessment of the prevailing economic policy which, despite generations of accumulated experience, still is not capable of solving one of its most elementary tasks; namely to prevent the origination of self-inflicted endogenous crises in the economy resulting in a drastically decreasing demand causing a drastically increasing unemployment and a waste of valuable resources.

It is a common view that an economy in crisis can not afford full employment and that it is necessary, in general, to cut down on the expenses and to increase the savings rate to lift the economy out of the crisis. But a behavior, private as well as public, focused on reducing expenses and debts, combined with a strong urge to save, does not automatically increase the rate of investment and especially not during economic crises.

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The problem, when such a behavior is spreading in the economy, is that it will result in a reduced consumption which, sooner or later, will result in a reduced production which, sooner or later, will result in a reduced investment rate which, per definition, means a reduced savings rate. In other words; the more a harmful "savings mania" is allowed to spread in the economy the lower the actual savings rate and the higher the unemployment rate. This is a vicious circle and exactly the opposite of what is needed in an economy in crisis.

The natural solution to the problem is to ensure a sufficiently high private consumption to avoid budget straining unemployment, unnecessary bankruptcies and increasing structural imbalances.

A clarification to avoid a misunderstanding; increased consumption does not have to be tantamount to increased resource depletion and/or increased environmental damage and/or increased budget deficit but can, with relatively simple, budget neutral, economic control means described below, be stimulated and guided towards goods and services minimizing the influence on the environment.

If no fundamentally new ideas and methods, beyond those which have thus far been applied and tested during and since the Great Depression, are accepted and put to use in the economic policy there is an overwhelming risk that old destructive patterns will be repeated with tragic consequences to individual countries and to the whole world. The problem is psychological, self-amplifying and destructive and needs to be addressed with a new economic paradigm capable of eliminating moral hazard, speculative bubbles, market crashes, financial crises and depressions.

This purpose of this indicative paper is to show the existence of a new positive and useful paradigm within the field of macroeconomics and to suggest practical methods to maintain an optimally strong, environmentally compliant and genuinely sustainable, employment-conducive demand in the economy.

1. Market instabilities and speculative bubbles

The free market is widely accepted thanks to its ability to create conditions conducive to growth and development. Furthermore, neither theory nor practice, have so far, been able to prove there is a better alternative.

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Despite the consensus about the merits of the free market there are some serious problems. One major problem is that the combination; free market and natural human behavior, is inherently unstable since there are destabilizing, feedbacks which can cause non-fundamental price fluctuations. This problem, which sometimes can cause extreme damage, has never been addressed properly.

Continued investments in assets whose prices are rising for a long period of time due to speculation, to levels disconnected from all relevant pricing fundamentals, will give rise to harmful imbalances in the economy – both financial and structural. Furthermore, current account deficits which have accumulated for a long period of time due to a fundamentally overvalued currency will also cause harmful financial and structural imbalances to build up. Sooner or later these self-inflicted, unnecessary and harmful, imbalances in the economy will be corrected. Always at a real cost which, in extreme cases, may become very high and burden the next generation in an unfair way.

When a real estate market has been rising for many years there may appear a general feeling that everything is under control since most real estate owners and creditors feel there is plenty of real estate value backing up both mortgage loans and top-up loans. Typical of such a situation is also that banks and credit institutions are generous in their lending and only demand relatively small down payments on loans. To these unsuspecting feelings and behaviors can be added the dismal fact that economists and politicians who, in advance, warn about the risks associated with real estate bubbles often lose credibility, especially if the economy is strong and the inflation is low and real estate prices continue to rise year after year.

The focus of the Central Banks on consumer price inflation is an important contributing factor to the excessive growth and subsequent collapse of real estate markets, since the interest rate, almost always, is too low to prevent the real estate prices to rise, at a rate that is higher than the rate of inflation, when a bubble is growing and too high to prevent the fall in real estate prices when a bubble starts collapsing. The fact that banks and credit institutions quickly become overly risk avert when prices begin to fall is also a factor amplifying the collapse of real estate prices.

There is no generally accepted definition of a real estate bubble. One reason could be the tradition of accepting any price level on a market as a simple balance between

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supply and demand. This simplistic view of the market price could also explain the general acceptance of an impotent financial infrastructure with a laissez-faire attitude allowing markets to operate without any stabilizing feedback. Markets can become highly destructive under such conditions.

There are theories that speculative bubbles are essential prerequisites to price collapses but, even if an elevated price level obviously increases the drop height and the risk, it is a fact that a market can crash from any level and still cause severe damage. For example, a sharp drop in real estate prices, from an arbitrary level, may put the whole financial system at risk.

The lack of sound rules and effective regulation with stabilizing feedback control in the financial system has created conditions for an unreasonably strong expansion of financial derivatives intentionally designed to be practically unanalyzable and the claim that such "advanced" economic instruments are desirable and beneficial has lost all credibility.

Since major economic crises occur relatively seldom, the great majority of traders are victims of a false sense of security that the widely used models for value and risk are reliable. This widespread delusion contributes to excessive risk taking and accumulation of dangerous imbalances in the financial system.

During economic crises there is a tendency to search for unfair, immoral and criminal behaviors of individuals, companies and institutions in order to explain the cause of the crisis but although such factors contribute to, and can worsen, the problems they are not essential to create an economic crisis.

2. Common, ineffective, measures in times of financial crisis and depression

Reducing the interest rate, reducing taxes and increasing the money supply in order to stimulate to increased consumption and demand in a depressed economy can be just as ineffective as trying to tow start a car by pushing on a rope attached to the rear bumper. The main reason is that those measures, although they increase the money available for consumption within the private sector, lack the feature to reward consumption per se and therefore are ineffective when the propensity to consume is seriously weakened due to a widespread crisis mentality. It's not a lack of money that is the problem in a

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depression; it is the lack of will to use the money.

Since employment is fundamentally linked to consumption, political admonitions to the unemployed to be more aggressive in their search for work, combined with cosmetic, pseudo-economic, measures to reduce unemployment without stimulating consumption per se, are so ineffective that they are bordering on the ridiculous.

Stimulus packages in the form of politically controlled projects financed by increased budget deficits may do some good but since such stimulus packages are emergency actions, and unmistakable signs of a failure to create the right conditions for a sound economy, they also become a constant reminder of the bad state of the economy. Furthermore, actions increasing an already large budget deficit may become counter-productive and worsen the problems in the economy by undermining the trust in the economic policy. They also increase the risk of an uncontrolled collapse in the value of the currency which would add new problems to a suffering economy.

For many years the message from the Central Banks to the real estate market has been obscure to say the least. During periods of excessive credit expansion and asset price inflation, even far above the rate of consumer price inflation, the Central Banks have in general been reluctant to increase their interest rate due to a fear that such an action could have a negative impact on the growth rate of the GNP. This fear has been based on the idea that the process of reducing or eliminating asset price inflation will reduce the rate of credit expansion and will have a negative influence on both the real estate market and the whole economy for a relatively long time. As long as there is acceptable growth in the economy and inflation is under control it has been claimed that the best approach is to wait and see and not take action unless there is a sharp price drop or a collapse in real estate prices. History has shown that this approach has harmed the financial system and the whole economy in various countries on many occasions to such an extent that the few percent extra accumulated growth in GNP, during the time the market has been controlled by (irrational) exuberance, has not only been wiped out but the disturbance has also caused an economic loss to society due to several years of low or even negative growth afterwards. Such mistakes are unnecessary and strange since one of the most important tasks of a Central Bank is to provide an economic climate conducive to a high, stable and sustainable rate of investment and employment with

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robust growth. The behavior and the mistakes are ideologically conditioned and do not stem from any fundamental difficulty to detect excessive and unsustainable credit expansion or harmful speculation.

To let the economy slip into depression is doubly wasteful since valuable production resources, production capacity and jobs will be lost despite the fact that the economy, sooner or later, is going to turn upwards again and that there will be a demand for more production resources, greater production capacity and more jobs than before the crisis to meet the accumulated demand for goods and services which inevitably will emerge when the crisis is over and the stock of real capital needs to be repaired and renewed.

The reduction in the ability to produce, will create problems in the recovering economy, in the future, when bottlenecks, due to the loss of production resources, loss of competent work force and loss of valuable organizational capital will result in damaging inflationary impulses which the Central Bank, by tradition, will fight with interest rate hikes with well-known harmful side effects as a result.

In times of economic crisis and depression it is common to hear appeals about buying domestically produced goods and avoiding imported goods, but the world-wide vicious circle of diminishing import and export which can be the result of such protectionism is well-known since the Great Depression.

The single greatest problem in a financial crisis is usually the collapsing value of the securities in the financial system, where the price of real estate is completely dominating. This problem must, and can, be solved quickly with a well-aimed and effective economic reward system to prevent years of capital destruction and human suffering. However, lowering the interest rate, even down to zero, is not an effective method if the average price of real estate at the same time is plunging with a two digit yearly rate.

The idea to use a regular bankruptcy procedure in order to separate bad credits from good ones, in the financial system, does not solve the fundamental problem; to let a dangerously unstable market freely determine the value of securities such as real estate and other assets. What is accepted, by the market, as a perfectly good security today can be a bad security in a month or a quarter from now depending on the whims of the market. If real estate prices were to continue to fall, after a financial reconstruction, such a bankruptcy procedure could be a very costly mistake.

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3. Destructive use of the interest rate

With inflation is usually meant consumer price inflation and by tradition Central Banks use their interest rate to keep the consumer price inflation within certain declared limits. Fighting inflation with the interest rate as a weapon is dangerous since the interest rate affects the price of real estate and can create conditions for moral hazard with long term price increases followed by more or less sudden uncontrolled price declines.

It may be appropriate to recall that the prevailing monetary policy, with an inflation target, has been praised by those in charge as being very successful over the last decades since it has been able to keep the consumer price inflation exemplary low and stable, even though a drawback has been a rate of unemployment that has almost always been unacceptably high. But what is the benefit of an economic policy that has been unable to prevent that the perhaps greatest financial imbalance in the history of the world slowly has been building up right in front of the eyes of all the responsible experts and financial institutions?

How long will this, strangely unsuitable, monetary policy, with an inflation target, continue to be used like a financial weapon of mass destruction? Since the sole purpose of the financial system is to serve the non-financial, real, economy this mode of conduct is even more bizarre.

Collapsing real estate markets can cause great damage since the financial system is not designed to cope with such stress. However, there is no law of nature demanding that Central Banks must use an interest rate policy with such harmful side effects.

Another fundamental flaw with interest rate hikes, as a remedy against inflation, is the fact that they make investment and production more expensive. Interest rate hikes thus, have a direct inflationary influence in the economy and only by making the interest rate so high and by letting it slow down the economy for such a long time, that the rate of consumption is pushed sufficiently far below the rate of production will the rate of inflation be reduced. In other words; the inflation rate is pushed down through a sufficiently large reduction of the demand relative to the supply. This method of fighting consumer price inflation is a sure way to increase the rate of unemployment since the cost increase due to the relatively large time integral of the interest rate invariably will be so large that it effectively harms both the inducement to invest and

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the will to produce.

A problematic side effect may occur if the production (rate), for some reason, were to decline faster than the consumption (rate). Under such circumstances the economy can be afflicted by stagflation, in other words; by a low, or even negative, rate of growth combined with a high rate of inflation and a high rate of unemployment since the supply of goods and services is not sufficiently large, relative to the demand, to push down the rate of inflation.

Sometimes Central Banks use their interest rate for the purpose of controlling the value of their own currency. This might have some, short-lived, influence on the currency market but the fact is that there is no fundamental correlation between the interest rate and the exchange rate. If such a correlation had existed, a Central Bank could pump its interest rate up and down and at the same time accumulate an arbitrarily large profit by alternately selling and buying its own currency. An initial correlation, if any, would not be long lived in such a situation and when the correlation is gone the interest rate can be freely optimized to the needs of the domestic economy.

4. An interest rate rule

A modern fighter jet is inherently unstable but that property does not prevent it from flying thanks to a stabilizing feedback control system. The economy is likewise inherently unstable but the stabilizing feedback control system has been lacking – a fundamental flaw which repeatedly has caused severe damage throughout the history of mankind. The analogy with the fighter jet is thought provoking but should not be stretched too far since there are basic human needs preventing a total collapse (in the demand) despite a derailed economic policy. However, history has shown that the rate of unemployment, the human suffering and the production loss may reach absurd levels.

Instead of using the interest rate, with an, from a serious control perspective, absurdly long time constant in the transmission mechanism, to fight consumer price inflation, with destructive side effects in the economy as a result, a Central Bank can, with advantage, use the interest rate to stabilize the price of the stock of real capital, where real estate is the dominating part.

The price of the stock of real capital in the economy can be controlled towards the

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replacement cost. For a trustworthy and effective control, the Central Bank interest rate should be adjusted sufficiently much and sufficiently often according to a stabilizing feedback rule. One possible interest rate rule can be:

$$\mathbf{r = (i + p) \cdot (e^{k \cdot m/c} - 1) / (e^{k} - 1)}$$ **Hoglund's Interest Rate Rule**

Where **r** is the Central Bank interest rate, **i** is the rate of inflation in the economy, **p** is the rate of productivity increase in the economy, **e** is the base of the natural logarithm, **k** is an adjustable feedback control constant determining the strength of the feedback, **m** is the market price of the stock of real assets in the economy and **c** is the replacement cost of the stock of real assets in the economy.

The basic feature of the rule is that it increases the interest rate when the price of real assets is rising and it decreases the interest rate if the price of real assets is falling. When the price of real assets is equal to the replacement cost then the rule sets the real interest rate equal to the rate of productivity increase.

The governing principle is that a properly formulated feedback rule takes advantage of the collective analytic capacity of the market and rewards those actors who act and can predict which price movements have a beneficial influence on the harmonization of private interest and common interest. This principle affects the behavior of the market actors in a desirable direction and market behavior optimization through the use of feedback rules and feedback markets will be an important field of research in the future.

To create conditions for a sustainable and fair balance between the time dependent financial rewards for supplying labor versus the time dependent financial rewards for supplying capital, the risk free real interest rate should reflect the rate of productivity increase in the economy. This is a fundamental principle for a development promoting and fair control of the interest rate. To achieve sustainable, genuine, price stability in the economy, without harmful side effects, for instance in the form of forced credit losses, also the risk free nominal net interest rate should be kept down at the same level as the rate of productivity increase – to avoid forcing an (indirectly) inflationary rate of credit expansion that exceeds the rate of real growth in the economy.

For developed, environmentally compatible, genuinely sustainable economies this means that the risk free net interest rate, on the average, could stay below 2 percent. An interest rate and a rate of productivity increase of 2 percent per year may seem low but

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it opens the possibility to achieve an accumulated real growth of just over 169 percent in 50 years, with unchanged working time, or opens the possibility to reduce the working time, for instance, from 40 to less than 15 hours per week if a shorter working time, and a higher quality of life, is chosen instead of increased consumption. Of course, it is also possible to choose a compromise between growth and reduced working time. Even considerably lower rates of productivity increase and interest will result in a large growth in a long time perspective. For example; a 1 percent increase per year over 1000 years will result in an accumulated growth of more than 2095815 percent.

If the rate of credit expansion in the economy is maintained at the same level as the rate of real growth, for example through stabilizing feedback control, then conditions are created to effectively avoid inflation even in such a long time perspective.

When the interest rate is used to control (and eliminate) the asset price inflation the consumer price inflation can, with advantage, be controlled (and eliminated) by the use of a variable consumption fee or a consumption subsidy adjusted sufficiently often and sufficiently much to avoid the growth of harmful imbalances in the economy.

5. Measures for elimination of financial crises, depressions and imbalances

If the market value of the stock of real estate in the economy has dropped so much that the financial system is threatened, and if the monetary policy is unable to solve the problem, then buying of real estate should be subsidized so generously that the prices on the market turn upwards.

The need for the subsidy is temporary since the result of a sufficiently powerful action will be that the price of real estate will quickly begin to rise which eliminates the need for the subsidy. In economies with large differences between local real estate markets the subsidy can preferably be adapted to the needs of the individual markets.

A quick recovery of the value of the stock of real capital through the use of a sufficiently powerful economic reward system, and then, with a proper use of the control interest rate, a stabilization of the value at a level reflecting the replacement cost, making harmful speculation unprofitable, is the single most important action in all countries suffering from falling real estate prices and financial crisis. The importance of protecting the value of the stock of real capital in the economy can hardly be over-

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estimated since it is the underlying security of the whole credit-based financial system.

In extreme situations when the propensity to consume has become harmfully weak there is always the possibility to introduce a flexible (an adjustable) consumption subsidy feedback. If the subsidy rewards consumption per se, to a sufficient degree, it will elicit an increased utilization of private financial resources and can quickly lift an economy to increased production, increased employment and growth, even from a depression.

To increase the credibility of the economic policy and to end the discussion about Ricardian equivalence the budget impact of all subsidies and fees can be limited or, if so desired, completely neutralized by the introduction of sufficiently large general income wage fees or reimbursements respectively. It is even possible to stimulate the economy and to reduce the budget deficit simultaneously. The principle is the same as mentioned in the paragraph above, namely to reward consumption per se sufficiently much at the same time as taxes and/or fees are raised. With the words; sufficient and sufficiently in this paper is meant, per definition, that the desired result is actually achieved.

Every Central Bank is fully capable to prevent harmful trade imbalances to arise. The simplest way of doing this is through buying (and selling) the currencies of other countries to such an extent that the repayments of accumulated trade debts are secured in the form of a "trade debt currency reserve". This procedure has a fundamental influence on the exchange rates and reduces the risk for an accumulation of harmful financial and structural imbalances causing unnecessary costs in the form of unemployment and capital destruction when they inevitably, sooner or later, are corrected. A general acceptance and application of this concept could also result in a profound and beneficial change in the behavior of the actors on the currency market.

6. A method for elimination of environmental problems and unfairness

Growth can be made environmentally compliant, genuinely sustainable and to an increasing extent immaterial if the ownership, use and depletion of natural resources, inclusive the emissions of environmental pollutants, directly or indirectly, are charged with sufficiently high, optimal, natural resource fees – which maximize the probability of the survival of mankind in a very long term perspective.

In order for high fees to be democratically viable a sufficiently large fraction of the sum

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of the fees needs to be repaid. An economic reimbursement mechanism can be created, for example, via a reimbursement account for every individual, or in other words; an account for regular repayment, in equal shares, to every person.

A general repayment on these terms can always be made profitable for the majority of the population and will then result in a growth and employment promoting redistribution of economic resources and purchasing power.

In a long term perspective sufficiently high taxes and fees on activities, both material and immaterial, which are harmful for the long term survival of mankind, could make it possible to successively abolish taxes and fees on activities, both material and immaterial, which are beneficial for the long term survival of mankind.

In plain language this means that taxes and fees on, among others, financial capital, real capital and human capital, inclusive work, can be abolished which would create an "economic quantum leap", in a positive sense. Under such conditions the sustainable purchasing power, which creates a demand for long term sustainable environmentally compatible products, can reach its full, optimal, potential which in turn will positively affect the economic conditions for innovation, investment, production, employment and genuinely sustainable growth.

Can a system with fees based on these principles be called fair? Most likely Rawls would have answered this question affirmatively if he had had the opportunity to express his opinion. Since the individual and automatic payment of resource fees, which will be an integral part of the price of all goods and services, is directly proportional to the actual utilization and consumption of natural resources, including the actual emissions of harmful substances, that each individual is causing, directly or indirectly, the payment can be seen as an individual and personal responsibility-taking for the resources used by every individual from the planet Earth. And since everybody and nobody own the Earth the repayment of the fees, in equal shares to every individual, can be seen as a substantial confirmation of the basic principle of universal fairness.

At present the repayment of fees to all people on the planet may seem unrealistic and utopian but if the principle of "reimbursement of natural resource fees" is applied in individual countries, and in unions, with good results, the power of the good example may be sufficient for a long term world wide acceptance of the principle.

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Literature

Allen, F and Gale, D (2000), "Bubbles and Crises", The Economic Journal, 110(460): 236-255.

Allen, F and Gorton, G (1993), "Churning Bubbles", Review of Economic Studies, 60: 813-836.

Bean, C R (2003), "Asset prices, financial imbalances and monetary policy: are inflation targets enough?", BIS Working papers No. 140 Review, 94(2): 14-18.

Bergo, J (2007), "Interest Rate Projections in Theory and Practice", Speech at the Foreign Exchange Seminar of the Association of Norwegian Economists, Sanderstølen, January.

Bernanke, B, Gertler M and Gilchrist, S (1996), "The Financial Accelerator and the Flight to Quality", Review of Economics and Statistics, 78, 1-15

Bernanke, B S and Gertler, M (1999), "Monetary Policy and Asset Price Volatility", Economic Review , Federal Reserve Bank of Kansas City, 4th quarter, 17-51; also presented at the Federal Reserve Bank of Kansas City's symposium, New Challenges for Monetary Policy, Jackson Hole, Wyoming, August.

Bernanke, B S and Gertler, M (2001), "Should Central Banks Respond to Movements in Asset Prices?", American Economic Review, 91(2): 253-257.

Bjorkman, V and Hoglund, S (2003), "The Feedback Market a New Way to Handle Skewed Asset Prices", Bachelor Thesis, ICU 03-30, Economics Library, Gothenburg.

Bordo, M D, Eichengreen, B, Klingebiel, D and Martinez-Peria, M S (2001), "Is the Crisis Problem Growing More Severe?", Economic Policy, 16(32): 51+53-82.

Bordo, M D and Jeanne, O (2002a), "Boom-Busts in Asset Prices, Economic Instability, and Monetary Policy", NBER Working Paper 8966, National Bureau of Economic Research, Cambridge, Massachusetts.

Bordo, M D and Jeanne, O (2002b), "Monetary Policy and Asset Prices: Does 'Benign'

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Neglect Make Sense?”, IMF Working Paper 02/225, International Monetary Fund, Washington.

Borio, C and Lowe, P (2002), “Asset Prices, Financial and Monetary Stability: Exploring the Nexus”, BIS Working Papers No. 114

Borio, C and Lowe, P (2003), “Imbalances or ‘Bubbles’? Implications for Monetary and Financial Stability” in Hunter, W. C., Kaufman, G. G., and Pomerleano, M. (Eds.) Asset Price Bubbles: The Implications for Monetary, Regulatory, and International Policies. Cambridge, Massachusetts: The MIT Press.

Borio, C and White, W (2004), “Whither monetary and financial stability? The implications of evolving policy regimes”, BIS Working Papers No. 147

Borio, C and Filardo, A (2004), “Back to the future? Assessing the deflation record”, BIS Working Papers No. 152

Bradford De Long, J (1991), “Liquidation Cycles and great Depression”, Harvard University and NBER

Cecchetti, S G (2005), “The Brave New World of Central Banking: The Policy Challenges Posed by Asset Price Booms and Busts”, Working Paper 2005/14, Czech National Bank, Prague.

Cecchetti, S G, Genberg, H, Lipsky, J and Wadhwani, S (2000), “Asset Prices and Central Bank Policy”, Geneva Report on the World Economy 2, International Center for Monetary and Banking Studies, Geneva; Centre for Economic Policy Research, London.

Cecchetti, S G, Genberg, H and Wadhwani, S (2003), “Asset Prices in a Flexible Inflation Targeting Framework” in Hunter, W. C., Kaufman, G. G., and Pomerleano, M. (Eds.) Asset Price Bubbles: The Implications for Monetary, Regulatory, and International Policies. Cambridge, Massachusetts: The MIT Press.

De Grauwe, P and Grimaldi, M (2004), ”Exchange Rate Puzzles: A Tale of Switching Attractors”, Sveriges Riksbank W P No 163

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Detken, C and Smets, F, “Asset price booms and monetary policy”, Paper from Workshop on 11 December 2003 on “Asset prices and monetary policy”, European Central Bank.

Dillén, H and Sellin, P (2003), “Financial bubbles and monetary policy”, Sveriges Riksbank Economic Review, 3, 43-68

Eichengreen, B and Mitchener, K (2003), ” The Great Depression as a credit boom gone wrong”, BIS Working papers No. 137

Filardo, A (2004), “Monetary Policy and Asset Price Bubbles: Calibrating the Monetary Policy Trade-Offs”, BIS Working Paper 155, Bank for International Settlements, Basel.

Fisher, I (1933), “The debt-deflation theory of great depressions”, Econometrica, 337-357

Goodfriend, M (2003), “Interest Rate Policy Should Not React Directly to Asset Prices” in Hunter, W. C., Kaufman, G. G., and Pomerleano, M. (Eds.) Asset Price Bubbles: The Implications for Monetary, Regulatory, and International Policies. Cambridge, Massachusetts: The MIT Press.

Greenspan, A (1996) “The Challenge of Central Banking in a Democratic Society”, Speech at the Annual Dinner and Francis Boyer Lecture of The American Enterprise Institute for Public Policy Research, Washington, D.C., December.

Greenspan, A (2002), “Economic Volatility”, Speech at the Federal Reserve Bank of Kansas City’s symposium, Jackson Hole, Wyoming, August.

Gruen, D, Plumb, M and Stone, A (2003), “How Should Monetary Policy Respond to Asset Price Bubbles”, Research Discussion Paper 2003-11, Reserve Bank of Australia, Sydney.

Heikensten, L and Vredin, A (2002), “The art of targeting inflation”, Sveriges Riksbank Economic Review

Illing, G (2001), “Financial Fragility, Bubbles and Monetary Policy”, CESifo Working

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Paper 449, Center for Economic Studies and Ifo Institute for Economic Research, Munich.

Miller, M, Weller, P and Zhang, L (2002), “Moral Hazard and the US Stock Market: Analyzing the ‘Greenspan Put’”, The Economic Journal, 112; 171-186.

Mishkin, F S and White, E N (2003), “U.S. Stock Market Crashes and Their Aftermath: Implications for Monetary Policy” in Hunter, W. C., Kaufman, G. G., and Pomerleano, M. (Eds.) Asset Price Bubbles: The Implications for Monetary, Regulatory, and International Policies. Cambridge, Massachusetts: The MIT Press.

Mussa, M (2003), “Asset Prices and Monetary Policy” in Hunter, W. C., Kaufman, G. G., and Pomerleano, M. (Eds.) Asset Price Bubbles: The Implications for Monetary, Regulatory, and International Policies. Cambridge, Massachusetts: The MIT Press.

Rawls, J (1971), “A Theory of Justice”, Harvard University Press, Cambridge, Massachusetts.

Sanctuary, M and Hoglund, A (2006), “A Flexible Pollution Tax”, A report written on behalf of Nutek - the Swedish Agency for Economic and Regional Growth.

Shiller, R J (2003), “Diverse Views on Asset Bubbles” in Hunter, W. C., Kaufman, G. G., and Pomerleano, M (Eds.) Asset Price Bubbles: The Implications for Monetary, Regulatory, and International Policies. Cambridge, Massachusetts: The MIT Press.

Svensson, L E O (1999), “Inflation Targeting as a Monetary Policy Rule”, Journal of Monetary Economics, 43(3): 607-654.

Svensson, L E O (2007), “Inflation Targeting” forthcoming in Blume, L. and Durlauf, S. (Eds.) The New Palgrave: A Dictionary of Economics, 2nd Ed. New York: Palgrave MacMillan

Trichet, J-C (2003), “Asset Price Bubbles and Their Implications” in Hunter, W. C., Kaufman, G G and Pomerleano, M (Eds.) Asset Price Bubbles: The Implications for Monetary, Regulatory, and International Policies. Cambridge, Massachusetts: The MIT Press.

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