An
Economic Paradigm
for
Stable, Sustainable Development

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1 *Abstract*

1 Reality has revealed dangerous flaws in the generally accepted economic and financial systems. Most countries in the world have at times suffered serious damage as a result of these flaws.

2 Many, so called, free markets are suffering from instability problems. Real estate markets, in particular, have repeatedly been afflicted by price rises followed by sharp price falls and sometimes so severe credit losses that the whole financial system has been threatened.

3 The mainstream monetary and fiscal policies have not been able to prevent these and other harmful economic instabilities. Despite centuries of accumulated experience and research the economic system is still fundamentally unstable and unreliable.

4 This paper advocates a reform of the economic system and the creation of an economic incentive structure which is favorable for stable, sustainable development. A first step could be economic rules harmonizing private interest with common long-term interest and private good with common long-term good.

5 With a properly designed stabilizing economic feedback control it is possible to maintain a sufficiently strong, balanced and sustainable, demand in the economy so that the resource utilization, the employment and the growth can be optimized without unnecessary interest rate hikes, financial imbalances or harmful inflation.

6 A high or increased rate of consumption and employment does not have to be tantamount to a high or increased rate of depletion of natural resources and increased environmental damage. On the contrary, even an increased rate of consumption can, with simple economic control fees, be made long-term sustainable and be guided towards goods and services reducing its harmful impact on the natural capital. The use of control fees can be designed to benefit the majority of the population and to have a neutral or positive impact on the budget, if so desired.

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2 *Introduction*

1 Markets can be efficient instruments for resource allocation in the economic system but under the wrong conditions they can become destructive and cause great damage. This paper contains a synoptic description of a practical method to stabilize markets and financial systems, to prevent economic imbalances and crises and to create uniquely high employment and genuinely sustainable development and growth.

2 The basic principle of the method is to create an incentive structure in the economy which is beneficial for stable, sustainable development. A first step in this direction is the use of rules that make private interest coincide with common long-term interest.

3 One way of applying the principle in a market economy is to introduce a stabilizing economic feedback control on those markets which have the potential to destabilize and harm the economic system. Such a feedback will make destabilizing speculative behaviors unprofitable and will, automatically and objectively, reward stabilizing economic behaviors. The feedback system can, in the long run, be made autonomous and be designed as an integral part of the market itself. This is, in other words; one way of making the market self-conscious, reflecting and internalizing – qualities which hitherto have been missing.

4 Reality has shown that conventional economic policy and in particular conventional monetary policy, well represented and expressed by the majority of the authors in the literature list below, has failed to maintain the stability of the economic system.

5 A sufficient knowledge of the significance, control and power, for good and evil, of the interest rate seems hitherto have been lacking in macroeconomic theory. This has, among other things, resulted in a world wide use of a psychologically misleading and financially destabilizing monetary and currency policy, combined with an often misguided and ineffective fiscal policy – a risky combination posing a serious

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threat to people and to the whole economy.

6 Also the knowledge about the disadvantages with and the control of suboptimal currency areas, like the euro zone, encompassing many countries in different stages of development and with different languages, labor productivity, tax systems, et cetera, has shown to be insufficient and there is an acute need of new insights and practical solutions.

7 Fortunately, properly designed economic control fees can give the countries within the euro zone almost the same benefits and free agency as countries with their own sovereign currencies and Central Banks.

8 One of the purposes of this, indicative and provocative, paper is to point out and try to eliminate some of the macroeconomic knowledge gaps, prejudices and myths still existing – knowledge deficits leading to monetary and fiscal policy measures which are bound to cause severe problems such as large imbalances in budget and trade, growth and collapse of speculative bubbles, financial crises, recessions, depressions, involuntary unemployment, environmental problems, et cetera.

9 This paper also shows that there is a simple and effective method to achieve both a sustainable development and a high rate of employment through the use of sufficiently high control fees on harmful emissions and depletion of finite resources. The fairest result can be achieved through a repayment of the fees, in equal amounts to all individuals. An important advantage with such a solution is that a majority of the population will always get more money in return than they pay in fees.

10 The author makes no claim that this paper is correct, consistent or complete and appeals to the reader to view the message expressed as an inspirational source to a new economic paradigm and to a further development of the principles indicated.

11 The words; sufficient and sufficiently, which are frequently used in this paper, mean, in this context by definition, that the intended or desired effect or result is actually achieved.

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3 *Fundamental financial facts*

1 Without expenses and debts the present financial system ceases to exist. Despite this, words like expense and debt often give rise to mistrust, negative thoughts and even fear, especially in times of economic crisis, due to a widespread ignorance of basic financial facts and of the difference between financial economics and real economics and between symbolic assets and real assets.

2 Every financial expense is also a financial income and every financial debt is also a financial asset, by definition. Say's Law for a monetary economy is based on these obvious facts. The essence of Say's Law is that the expenses for the production are also exactly the incomes needed to make it possible to buy everything that has been produced.

3 Expressed in such terms Say's Law is valid, by definition. However this does not guarantee that all the incomes in a monetary economy are actually used for consumption or that all the goods which have been produced are demanded. Consequently Say's Law is not always valid if expressed as; "The supply creates its own demand".

4 Although the important difference between the potentially possible demand and the actual demand has been recognized the monetary and fiscal policies are still both inefficient and potentially dangerous due to the absence of a sound incentive structure in the economy.

5 Despite the occurrence of a relatively high rate of unemployment in most countries, the fact is that the number of societally beneficial and profitable work tasks is, and always will be, unlimited.

6 Furthermore, financial assets, like for example money, are symbols that can always be created at will, in sufficient amount, to make it possible to pay for all work that can be done.

7 Finally, there is no law of nature preventing the rules in the economic system to be designed in a way that reward a sufficiently high demand, consumption and employment and at the same time reward

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investment, production and supply to a sufficient degree so that consumer price inflation is avoided.

8 One step in the right direction could be the use of stabilizing feedback control, for example of the market price of the stock of real assets, as a means of harnessing the rate of credit expansion and securing the financial system.

9 Recessions and depressions resulting in high, involuntary unemployment are just as unnecessary as they are harmful, in the light of the financial and logical facts mentioned above. However, due to an unsuitable, unpsychological and ineffective economic policy which has created a more or less harmful incentive structure in the economy, there has almost always been an unnecessary waste of capital, both of real capital and of natural capital but worst of all of human capital, sometimes reaching absurd levels.

10 No law of nature prevents a societally beneficial redistribution of purchasing power in the economy through a regular repayment of money, in equal amounts to all. The redistribution can, with advantage, be financed through an equal percentage tax on every wage income and/or fees on harmful emissions, in a fair and equal manner.

11 These simple facts ought to be sufficient to guide every honest economist to a reassessment of the basic principles of the prevailing economic policy which, despite generations of accumulated experience, is still lacking sufficient knowledge (wisdom) to solve one of its most elementary tasks; namely to prevent the origination of self-inflicted economic imbalances and endogenous crises. Unnecessary crises causing vicious circles of decreasing demand and increasing unemployment, resulting in an unfairly allotted suffering, where those who are the least guilty of the origination of the crises often are the hardest afflicted by their harmful effects and where those who have the power to control the economy seem to be totally devoid of accountability.

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4 *Market instabilities and speculative bubbles*

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

2 Despite the consensus about the merits of the free market there are some serious problems. One of these is that the combination; free markets and natural human behaviors, is unstable since there are destabilizing feedback mechanisms which can cause non-fundamental price fluctuations making the efficient market all but efficient. In other words; the market has been lacking a functioning 'sense of balance'. This disability, which sometimes can cause extreme damage, has never been remedied. However, a cure has been proposed in a bachelor thesis by Bjorkman, V and Hoglund, S (2003) with the title; "The Feedback Market – a New Way to Handle Skewed Asset Prices".

3 Continued investment and/or speculation in assets whose prices are rising faster than the rate of consumer price inflation may give rise to dangerous financial and harmful structural imbalances in the economy. Furthermore, trade imbalances, which are allowed to accumulate for a long period of time, will also cause wasteful financial and structural imbalances. Sooner or later these, for the most part self-inflicted, unsustainable imbalances in the economy will be corrected – always at a real cost which sometimes may become very high and burden the next generation in an unfair way.

4 When a real estate market has shown growth for many years there may evolve a general feeling that everything is under control. Most real estate owners and creditors then feel confident that the value of real estate, even though it undoubtedly is inflated, is more than sufficient as a security for both mortgage loans and top-up loans.

5 Typical of such a situation is also that banks and credit institutions

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are generous in their lending and only demand a relatively small down payment on mortgage loans. To these unsuspecting feelings and behaviors can be added the fact that economists and politicians who warn about the risks associated with inflated real estate markets often lose credibility – especially if the rate of consumer price inflation is low.

6 The ideologically controlled focus of the Central Banks on consumer price inflation has been an important contributing factor to the many cases of speculation-driven abnormal growth with subsequent collapse which have afflicted real estate markets.

7 This narrow focus results in the interest rate being too low when a bubble is growing and too high when a bubble is collapsing. The fact that banks and credit institutions often make a complete reversal and become harmfully restrictive in their lending, when prices begin to fall is also a factor amplifying the collapse of real estate prices.

8 What is a too low respectively a too high interest rate is, of course, always relative. However, it is of crucial importance for the result of the monetary policy that the influence of the interest rate, on the behavior of companies and individuals, on the economy in general and on the real estate market in particular, to such a high degree is controlled by expectations which the Central Banks have not been able to control.

9 An interest rate, even at a considerably higher level than the sum of the rate of consumer price inflation and the rate of increase of the average labor productivity, will not have a sufficiently dampening influence on the rate of credit expansion, if the dominating expectation in the economy is that the rate of price increase on the real estate market will be even higher than the interest rate.

10 Such expectations are strengthened and consolidated by the historical behavior of the Central Banks and their documented reluctance and inability to control the asset price inflation effectively.

11 The same expectations have also created conditions for unsound

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credit expansion where adjustable rate mortgage loans have been granted real estate buyers whose economic resources have been insufficient to pay the whole interest cost and where private budgets have been based on the expectation of a continued increase in the market value of the property and a successive increase of the loans or a sale with profit.

12 A radical cleanup of the real estate market can be achieved through an active stabilization with some form of trustworthy economic feedback control, for example based on the (corrected) replacement cost of the stock of real estate. This can eliminate both harmful, destabilizing speculation and unsound credit spontaneously without any need for new laws, complicated rules or bureaucracy costs.

13 Another important positive effect of a stabilized real estate market, with a replacement-cost-controlled credit volume, is that the interest rate then, on the average, can be kept at an optimally low, investment-stimulating, employment-creating, production-increasing, inflation-dampening and sustainable level reflecting the rate of increase in the average labor productivity in the economy.

14 There has, so far, not been any generally accepted definition of a real estate bubble. One reason could be the traditional textbook claim that any price level whatsoever on the market always is a simple balance between supply and demand. This narrow and simplistic view of the market price may explain the unsuspecting acceptance of an unsustainable growth of financial capital with a laissez-faire attitude which has allowed markets to fluctuate arbitrarily without any stabilizing feedback or 'sense of balance'.

15 There are theories that speculative bubbles are essential prerequisites to market collapses, but it is a fact that a real estate market can be made to crash from any price level and still cause a severe economic crisis by undermining the financial system – even if an inflated price level obviously increases the risk.

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5 *Financial derivatives and asset pricing models*

1 Ignorance, unsound rules and a lack of stabilizing feedback in the financial system have created conditions for an excessive growth of questionable financial derivatives. Sometimes these derivatives have, intentionally, been designed to be practically unanalyzable and the claim that all such ‘advanced’ economic instruments have been created to offer the market actors better possibilities to hedge against risk, and therefore are beneficial, has lost all credibility.

2 Since major economic crises occur relatively seldom, a majority of traders are victims of a false sense of security that their risk and pricing models are useful and reliable. For example; asset pricing models which are not based on fundamental, resource-limited, economics are self-defeating. This is true no matter how well these models seem to perform when they, seemingly, can be validated with historical data. They are bound to be faulty and misguiding if they become fully accepted and universally applied, since the collective behavior of the market actors then inevitably will drive the asset prices, with a positive, destabilizing, feedback, and violate the unrealistic assumptions which the models are based on.

3 A common assumption in the models is that no individual actor is able to affect the price level of the market. But if the prices on a market have risen at a rate that is considerably higher than the rate of consumer price inflation for many years then it is natural that a majority of the actors on the market will display a herd-like behavior driving the prices upward. If there, simultaneously, is no coupling or anchoring of the price level and the total credit volume on the market to some ‘deflated value’ then it is only a proof of ignorance to claim that such a market is effective and that it will function best if left alone.

4 A cynic may claim that it is beneficial to allow markets to inflate and then crash so that the actors will learn a lesson for life. But to let

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generation after generation repeat the same mistakes, with high costs and serious damage to society, is neither necessary nor beneficial even if a minority of the population always has the means and the ability to take advantage of economic turbulence and excessive price fluctuations. Such recurring economic disturbances are no natural phenomena beyond human control – only signs of a mismanaged and badly organized economy.

5 Most of the financial institutions which have been created to grade creditworthiness suffer from the same faulty conception of value and risk, as described above. This causes unrealistic and false information to pervade the credit system which inevitably results in wrong decisions and to an accumulation of dangerous imbalances which, sooner or later, will create financial and economic crises. The tragedy is that this almost always results in the real economy being damaged and that innocent people will suffer unjustly while those who have created the conditions for the crises often are neither harmed nor subject to any liability.

6 During economic crises there is a tendency to put the blame on the immoral, conspiratory or criminal behavior of individuals, companies and institutions. But although such factors, of course, contribute to and can worsen the problems, they are by no means essential to create a crisis – recurring economic imbalances, disturbances and crises have in fact been the hallmarks of the mainstream monetary policy.

7 Few, if any, major financial crises have come as a surprise to those economists who have a basic knowledge of the long term effects of and the risks associated with unharnessed credit expansion. When the market prices and the credit volume are allowed to be disconnected from fundamental values and feelings of greed or fear begin to dominate then the market, sooner or later, becomes unsustainable.

8 The fact that the prime cause of the problems and crises is a trivial, unremedied error in the economic system is never discussed.

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6 *Common, ineffective, measures in economic crises*

1 It is a common misconception that an economy in crisis cannot afford full employment and that it is necessary to cut down on the expenses to increase the saving rate and 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 saving – especially not during an economic crisis.

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

3 Reducing the interest rate, reducing taxes and increasing the money supply in order to stimulate the demand and the consumption in times of financial crisis, economic recession or depression is not an effective measure either and can often be just as effectless as pushing on the end of a rope. The main reason for this ineffectiveness is that such measures, although they increase the money available within the private sector, do not reward the consumption per se. Therefore they are misguided and ineffective when the propensity to consume is seriously weakened due to a widespread crisis mentality, often fueled by a continuous flow of bad news about the problems in the economy.

4 Simply stated; it is never a general lack of money that is the problem in an economy, not even in times of crisis or depression – it is the lack of will to use the money. If those who have money in abundance do not want to spend their money to a sufficient extent then serious prob-

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lems will inevitably arise, due to a harmfully low demand in the economy, commonly in the form of decreasing sales, decreasing incomes, an increasing rate of credit losses, an increasing rate of bankruptcies, an increasing rate of unemployment and an increasing budget deficit.

5 To let those who have money in abundance lend money, at interest, for consumption use, to those with little money is a way of worsening the problem of purchasing power imbalances and under-consumption in the economy.

6 Since the rate of employment in the economy is strongly and positively correlated to the total demand and the rate of consumption, then political admonitions to the unemployed, to be more aggressive in their search for work, are pathetic – especially when such admonitions are combined with a plethora of cosmetic and deluding measures to reduce unemployment. It is an expression of political desperation and ignorance to pursue an economic policy, in a market economy, which in practice is forcing firms to reduce their productivity.

7 Stimulus packages in the form of politically controlled projects financed by increased budget deficits may sometimes do some good. But since such stimulus packages often are rather inefficient 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.

8 Furthermore, measures increasing an already large budget deficit pose a serious risk of becoming counterproductive by undermining the trust in the economic policy, further warping the infrastructure and retarding the recovery in the economy.

9 One deterrent example of the mismanagement of a harmfully low demand in the economy, after a real estate market collapse, is found in Japan. The budget debt per capita in Japan is now the largest in the world after almost two decades of serious economic problems and a

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large number of massive, ineffective stimulus packages.

10 The failure in the Japanese economy is even more spectacular when considering that the budget was in excellent shape when the real estate market began its descent.

11 Countries who end up in acute problems with a large debt, after a long period of accumulating deficits will of course face an even more difficult challenge. A typical scenario in such a situation is that the market rate of interest soars and that the problem of refinancing the debt becomes acute. To continue to borrow on the financial market under such conditions is in practice a direct embezzlement of public money and may result in a vicious circle ending in bankruptcy.

12 Another typical measure in such a situation are more or less brash reductions in the budget expenses with little or no regard to negative psychological effects and unemployment. This will, of course, worsen the acute problems and may result in serious economic disturbances and protest reactions which further worsen the problems.

13 To let the economy slip into recession or depression is doubly wasteful since valuable production resources and production capacity will be lost despite the need for more production resources and greater production capacity, both to stimulate the economy and to meet the pent up demand for goods and services when the crisis is over. The damage inflicted on the production structure in the economy in times of low demand and high unemployment is a real loss and will incur a cost in the future when the damage must be repaired.

14 The reduction of the ability to produce will also create problems with the recovery in the economy. Then bottlenecks, due to loss of production resources, loss of competent labor force and loss of organizational capital, will result in an inflationary pressure which the Central Bank, by tradition, will fight with interest rate hikes – with accompanying well-known harmful side effects.

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7 *An obscure and misguided message*

1 For many years the message from the Central Banks to the real estate market has been obscure. During periods of strong credit expansion and asset price inflation, often far above the rate of consumer price inflation, the Central Banks have in general been reluctant to increase their interest rates sufficiently fast and sufficiently much due to a fear that such measures could slow the economy, increase the rate of unemployment and make the real estate market collapse.

2 The opinion has been that if the prices on the real estate market begin to drop sharply then little or nothing can be done, to restore the confidence and the price level, by using the monetary policy. It is a well established fact that a collapsing real estate market can have a negative influence on the whole economy for several years.

3 It has been claimed that as long as the rate of consumer price inflation is relatively low, and under control, the best approach is to take no action and not let the real estate market have any direct influence on the monetary policy.

4 History has shown that this approach has harmed the financial system, the human capital and the whole economy on many occasions and caused involuntary unemployment and real economic losses.

5 Furthermore, economies and markets which are stimulated by strong price increases and an excessive credit expansion tend to seriously warp human behaviors and economic decisions and to promote an unbalanced and unsustainable resource allocation which later must be corrected at a high cost.

6 It does not take advanced analysis to understand that the excessive demand on an overheated, price inflated real estate market is seldom dominated by a fundamental physical need since this excessive demand can be replaced by an equally excessive lack of demand a relatively short time later when the market collapses.

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7 That the Central Banks allow real estate markets to overheat is both unnecessary and strange since one of the major responsibilities of a Central Bank is to provide an economic climate conducive to a robust, high rate of investment and employment with stable, sustainable growth. But the overly passive behavior of Central Banks, towards fluctuations in the price level of real assets, is well-known and seems to be ideologically conditioned since it can hardly stem from any fundamental difficulty to detect excessive and unsustainable credit expansion or harmful speculation.

8 To allow the prices on the real estate market inflate considerably faster than the rate of consumer price inflation for many years and to ignore the underlying credit expansion on that market, fueling the asset price inflation, is irresponsible to say the least and can, in some cases, create conditions for a destructive economic tsunami.

9 If those in control of the monetary policy of the Federal Reserve did not understand the extreme danger threatening the US economy, as a natural consequence of an unbridled credit expansion, an uncontrolled asset price inflation and a runaway trade deficit, long before the severe financial crisis became a reality in the year 2008, then the question arises; were they the right persons to control the monetary policy?

10 Alternatively, if they understood the gravity of the situation and yet willfully abstained from applying a sufficiently effective stabilizing economic control, then the same question arises; were they the right persons to control the monetary policy?

11 Are these economic imbalances and destructive forces with accompanying capital destruction and human suffering of gigantic proportions the best that can be expected? Are financial crises with a magnitude threatening the existence of the financial system an unavoidable feature of the market economy? Is it impossible to organize and manage the economic system so that it becomes stable and reliable?

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12 The answers to the questions above is, of course, no! One of the main reasons to the major problems in the economy is the simple fact that markets are inherently unstable as a result of natural human behaviors. The good news is that; with a properly applied feedback control in the economy these problems can be solved.

13 The main problem in an acute financial crisis is usually the collapsing value of the underlying securities in the financial system, where the value of real estate is dominating. However, such a value collapse, which usually is a result of a prolonged accumulation of unsustainable imbalances in the economy, can quickly be reversed and the value of the securities can be restored with a well-aimed economic reward system.

14 In practice such a reward system can be constituted of a sufficiently high, variable percentage selling fee, which can be positive or negative and a corresponding and equally large buying fee of the opposite sign (in other words; a buying subsidy) making the system cost neutral to both market and budget.

15 To reduce the interest rate, even down to zero, is ineffective against financial and real estate crises, especially if the prices on the real estate markets are falling with a two digit yearly percentage rate.

16 The idea of trying to create beneficial conditions through interest rate cuts, income tax cuts and liquidity increasing measures to achieve a certain desired behavior misses the target by not properly addressing the psychological effects of an economic crisis. During a real estate market collapse, resulting in a financial crisis, economic control measures are required which sufficiently powerfully reward the desired behavior per se – anything else is just wishful thinking.

17 Of course it is always possible to let the crisis run its course and pretend that what is happening is an economic purging process and a weeding out of excesses. But such an approach disregards the extreme waste of valuable resources in the economy and the enormous indi-

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vidual suffering, often with a totally unacceptable and unfair allocation.

18 The proposal to use a regular bankruptcy procedure in order to separate bad credits from good ones 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 the real estate prices were to continue to fall after a financial reconstruction such a bankruptcy procedure could be a very costly mistake.

19 A common knee-jerk reaction in the wake of a financial crisis is the demand for a higher capital adequacy ratio in the financial system. But a conventional, unstable, financial system of the present type could become even more unstable with a higher capital adequacy ratio, even if the capital adequacy ratio was so high that it always secured the survival of the system. This would namely not only facilitate unbridled speculation but also become ineffective and potentially harmful since the financial system then would be able to fluctuate unrestrainedly and ravage the real economy without itself ceasing to function.

20 Instead of replacing one problem in the financial system with another it is possible to create a healthy financial system where the total volume of credit and the stability is secured by a replacement-cost-anchored feedback control which prioritizes the needs of the real economy and makes harmful (destabilizing) speculation unprofitable.

21 When the financial system has been stabilized, for example, according to the principles proposed in this paper, then it is possible to radically improve the reliability and fairness in the system through the introduction of a secure, full-reserve credit system and where the only legal source of fiat-credit is the Central Bank. The introduction of such a system will, no doubt, meet intense opposition from those financial institutions enjoying the age-old privilege of creating credit ex nihilo.

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8 *Destructive use of the interest rate*

1 With inflation is usually meant consumer price inflation and by tradition Central Banks use their interest rate to keep the rate of consumer price inflation within certain declared limits.

2 The interest rate affects the price of real estate, whether this is intended or not, which has created conditions for moral hazard with periods of uncontrolled real estate price inflation followed by periods of uncontrolled real estate price deflation with more or less harmful effects on the financial system and the real economy.

3 Controlling the consumer price inflation with the interest rate as a weapon or instrument is an ineffective, harmful and risky practice due to several fundamental reasons.

4 A harmful flaw with interest rate hikes, as a remedy against consumer price inflation, is that they, in addition to making the production more expensive, which tends to reduce both the supply and the competition, also diminish the inducement to invest. Interest rate hikes thus have a direct inflationary, or more correctly; stagflationary, influence in the economy and only by making the interest rate damagingly high and by letting it slow down the economy for such a long time that the rate of consumption is pushed down sufficiently far, relative to the decreasing rate of production, will the rate of inflation eventually be reduced.

5 This sluggish and ineffective method of fighting consumer price inflation is a sure way to increase the rate of unemployment since the reduced demand and rate of consumption, combined with the cost increase, due to the need for a relatively large time integral of the interest rate hike, invariably will harm both the inducement to invest and the will to produce which for obvious reasons will have a negative influence on the rate of employment.

6 Yet another unwanted side effect of interest rate hikes has occurred on several occasions when the consumption rate for some reason

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has declined slower than production rate. This has caused stagflation characterized by a low, or even negative, rate of growth combined with a relatively high rate of inflation and unemployment, since the supply of goods and services is not sufficiently large, relative to the demand, to push down the rate of inflation.

7 It may be appropriate to mention that the prevailing monetary policy, with an inflation target, has been praised by its advocates as being very successful over the last decades since it has been able to keep the rate of consumer price inflation exemplary low and stable. But what is the benefit of such a selectively blind monetary policy which simultaneously has made it possible to create one of the greatest financial imbalances in the history of the world and allowed it to happen?

8 How long will this strangely unsuitable monetary policy, with a consumer price inflation target, continue to be used like a potential financial weapon of mass destruction? Since the sole purpose and raison d'être of the financial system is to serve the non-financial, real, economy this mode of conduct becomes even more indefensible and bizarre.

9 Sometimes a Central Bank will raise (or are exhorted by IMF to raise) its interest rate with the intent to stabilize or increase the value of its own currency. Due to ignorance this kind of measure may have some influence on the currency market for some time but there is simply no fundamental correlation between the control interest rate and the value of the corresponding currency. If such a correlation had existed, a Central Bank could, at any time, choose to pump its interest rate up and down and accumulate an arbitrarily large profit by alternately selling and buying its own currency. An initial correlation between an interest rate and an exchange rate will not be long-lived in such a situation and when the correlation myth has been revealed the interest rate can be freely optimized for the needs of the domestic economy.

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9 *Monetary policy and psychology*

1 A certain specific change in the Central Bank interest rate may result in diametrically different reactions and results depending on the mood pervading the economy. In other words; conventional monetary policy is strongly dependent on psychological factors which it is badly designed to control.

2 The shortcomings of the monetary policy become most obvious when the rate of asset price inflation and the rate of consumer price inflation diverge strongly. This is a serious problem which has resulted in unacceptable consequences and the main reason for the existence of the problem is the use of both economically and psychologically inefficient and unsuitable control instruments in the monetary policy.

3 *Some possible results from an interest rate increase:*

4 In a (psychologically) special case one or more interest rate hikes may have little or no influence on the economy for a limited time.

5 It is also possible that one or more increases of the control interest rate of the Central Bank may result in a reduced rate of credit expansion or to a credit contraction with falling prices, if expectations of bad times are dominating among the majority of the actors in the economy.

6 Yet another possibility is that several interest rate hikes combined with an increased rate of credit expansion and rising prices, especially on the real estate market, for a relatively long time may be interpreted as signs of good times.

7 However, a gradually growing awareness of a credit bubble, a fear of inflation and an increasing difficulty of finding real estate buyers willing to pay ever higher prices may finally become so alarming that the optimism and the expectations of good times of the majority turn into pessimism and expectations of bad times so that the rate of credit expansion and the rate of asset price inflation reverses and changes sign –

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usually and unfortunately, far too late.

8 A deterrent historical example of an unpsychological, ineffective and dangerously destabilizing monetary policy in such a situation are the 17 (seventeen) consecutive, anxiously small, increases in the Federal Funds Rate, in the USA, from July 2004 to July 2006, preceding the greatest financial crisis since The Great Depression.

9 It should be obvious that this kind of monetary policy, with absurd side effects, is a parody of macroeconomic control and ought to result in a general awakening and to a radical reassessment of the whole paradigm of the monetary policy.

10 ***Some possible results from an interest rate decrease:***

11 It is possible that one or more decreases of the control interest rate of the Central Bank may result in an increased rate of credit expansion and in rising prices, especially asset prices, if expectations of better times are dominating among the majority of the actors in the economy.

12 If the fear of bad times is dominating among the majority, then one or several interest rate cuts can be interpreted as a confirmation of an economy in bad shape and may then be accompanied by a reduced rate of credit expansion or a credit contraction with collapsing real estate prices causing a financial crisis which slows the economy with a recession or even a depression as a result.

13 In a (psychologically) special case one or more interest rate cuts may have little or no influence on the economy.

14 ***Some possible results of a general credit contraction:***

15 A credit contraction leading to a reduced rate of investment resulting in a reduced rate of production and a diminished supply may have an inflationary influence on the economy unless the demand and the rate of consumption drop sufficiently. The rate of employment will be affected negatively under such circumstances.

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16 A credit contraction resulting in a reduced rate of consumption and a reduced demand may have a disinflationary or even deflationary influence on the economy unless the rate of production and the supply drop sufficiently.

17 A credit contraction which results both in a reduced rate of production and a reduced rate of consumption may, if there is a balance between supply and demand, result in stable inflation or price stability. However, this is will inevitably have a negative influence on the rate of employment in the economy.

18 ***Some possible results of a general credit expansion:***

19 A credit expansion which is mainly used to increase the rate of investment and the rate of production resulting in an increased supply may have a disinflationary influence on the economy and may, in extreme cases, result in deflation. The rate of employment will increase under such circumstances.

20 A credit expansion which is mainly used to increase the rate of consumption and the demand may have an inflationary influence on the economy and may, in extreme cases, result in hyper-inflation.

21 A credit expansion which is used to increase both the rate of production and the rate of consumption may, if there is balance between supply and demand, result in stable inflation or even price stability. Such a balanced credit expansion and growth also reduces the rate of unemployment.

22 The gist of the examples above is that the influence of monetary policy on the economy is strongly dependent on expectations and mass psychology. This is one of the reasons why the hypothesis of the existence of a natural interest rate, or equilibrium interest rate, hitherto has shown to be so elusive and difficult to use in the monetary policy.

23 Another reason for the more or less spectacular failure of the

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worldwide monetary policy, with an inflation target, which is influenced by this hypothesis, is the excessive interest for the consumer price inflation in sharp contrast to the disinterest for the asset price inflation and its important interaction with the rate of credit expansion. An interaction causing effects in the economy which circumvent the conventional monetary policy and sometimes result in collapsing real estate bubbles and financial crises with severe damage to the resource utilization, the employment and the growth.

24 To minimize the risk of the monetary policy at times becoming a parody of macroeconomic control a new, psychologically sound and trustworthy, replacement-cost-anchored, credit-expansion-controlling monetary policy is needed.

25 Perhaps the greatest deficiency in modern monetary policy has been the unsuspecting acceptance of a virtually complete decoupling of the market price of the stock of real assets from its replacement cost or more specific; from its wear and tear corrected replacement production cost.

26 At present there is hyperactivity in the work to create new rules and regulations for banks and credit institutions in the wake of the world wide financial crisis which erupted in 2008. But the gist of the new ideas which have surfaced so far indicates an almost total lack of insight into, understanding of and measures against the fundamental systemic flaws in the financial system, in the monetary policy, on the real estate market, on the currency market and in the world trade.

27 Without a radical reassessment of and change in the current economic paradigm then new speculative bubbles, collapses, financial crises, economic crises and unnecessary, harmful unemployment will continue to afflict the economic system and damage the real economy resulting in a completely unnecessary waste of valuable resources and to severe suffering for individuals without an economic safety net.

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10 *An asset price controlling interest rate rule*

1 The interest rate has often created antagonism between rich and poor and has been misused for unfair, non-productive accumulation of capital and power for thousands of years.

2 The interest rate can be a fair and effective economic instrument to create beneficial conditions for investment, employment, development, growth and prosperity but it can also be a destructive financial stealth weapon causing harmful inflation and deflation, unnecessary bankruptcies, mass unemployment, capital destruction, widespread poverty and unfair suffering, all depending on how it is used or misused.

3 The interest rate, and its use for good and evil, has eluded and is still eluding the analyses of the greatest and most respected economists.

4 There is a theory that the market rate of interest reflects the marginal return on capital or in other words; that the marginal return on capital controls the market interest rate or vice versa. The theory may seem to be logical but raises the question; what is controlling the marginal return on capital? If the marginal return on capital is affected by the rate of investment and the market interest rate affects the rate of investment then the theory becomes a meaningless circular reasoning where the market interest rate and the marginal rate of return on capital will become arbitrary.

5 It is a fact that in order to achieve an optimum rate of investment and return in the whole economy, in a societal economic perspective, the rate of investment should be increased until the marginal return on investment (the marginal return on capital) is diminished to zero or in other words; until the rate of investment is so high that it gives the greatest possible total net return.

6 In other words; as long as the net rate of return on an investment is greater than zero, in a long-term societal perspective, it ought to be made. To think that the market interest rate is or should be some kind

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of investment barrier is a grave misunderstanding.

7 It is possible to push the rate of investment towards the optimum and approach the ideal case even when the rate of interest is greater than zero, thanks to the competition that exists in a genuine market economy and the fact that the exact rate of return on an investment can never be known for sure at the time when it is made.

8 In reality there is no simple and clear, generally known, monotonously decreasing function for the return as a function of the rate of investment. A more realistic function is based on the principle of gradually increasing risk in relation to the expected return. If it were possible to know the exact return in advance then, for obvious reasons, no voluntary investments with a return lower than the, so called, risk free interest rate would be made. Such an investment limitation would mean a considerable real loss of wealth.

9 If the rate of investment is below the optimal in the economy there is always the possibility to increase it with investment subsidies. If this is done in an effective way, for example by being combined with properly balanced taxes and/or fees on negative externalities it can result not only in a higher but also in a long-term sustainable rate of production and consequently also a higher possible average standard of living.

10 It is a common view that the stock market will always grow at a considerably higher rate than the whole economy since this has been true for almost two centuries. But as a consequence, of the fact that the total value of the stock market then will become an ever greater fraction of the whole economy, this is, of course, a logical impossibility.

11 The amount of investment capital raised on the stock market by listed companies is a very small fraction of the total turnover on that market. Speculation-prone, trend-amplifying actors do not improve the important risk capital function of the stock market, which is one of the

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prime reasons for its existence. A ban on buying stocks on margin can be a first step in the right direction to reduce harmful speculation.

12 Outdated, counterproductive insider trading rules should be changed since they counteract their purpose and in practice maximize the possibilities of profiting from information exchange between insiders in different listed companies. Insider trading should be encouraged, facilitated and displayed so that price-sensitive information is revealed with the smallest possible time delay, thereby creating conditions which minimize the insider profits and maximize the market efficiency.

13 A modern fighter jet is designed to be inherently unstable but that quality does not prevent it from flying but, on the contrary, improves its performance thanks to a stabilizing feedback control system. The economy is likewise inherently unstable but a reliable control system, with a stabilizing feedback based on suitable parameters, has so far been lacking. This is a systemic flaw which repeatedly has caused disturbances and damage to the real economy.

14 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 misguided, ineffective and even destructive economic policy but history has shown that the production loss, the rate of unemployment and the human suffering sometimes may reach both embarrassing and unbearable levels.

15 Instead of using the interest rate with an, from a serious control perspective, absurdly long time delay in the transmission mechanism, to fight the consumer price inflation and trying to eliminate business cycles, with a negative influence on investment and supply in the economy as a result, a Central Bank can, with advantage, use the interest rate to control and/or eliminate the asset price inflation and secure the value of the stock of real assets, where real estate is the dominating part.

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16 When the interest rate is used to control the price of the stock of real assets that will simultaneously and automatically also result in a relatively direct and robust control of the total amount of credit in the economy. Furthermore, the need for long, unemployment-causing, time periods with a harmfully high control interest rate is eliminated.

17 Perhaps the most important improvement in the economy may prove to be the positive psychological effects on human behavior when harmful, destabilizing, speculation is made unprofitable. This will not mean the end of speculation as such since beneficial, stabilizing, speculation will be favored under these conditions.

18 The price of the stock of real assets in the economy can with advantage be controlled towards the replacement cost. Since the rate of credit expansion in the economy is strongly coupled to the growth rate of the price of the stock of real assets in the economy such a control strategy is an important condition for financial stability.

19 Without any coupling between market price and replacement cost, speculative investments in rising market prices and speculative investments in production of real capital (real assets) can result in an arbitrary rate of credit expansion and an arbitrary warping of the capital structure which sooner or later will result in uncontrolled price corrections and costs due to the defective capital structure with sometimes very severe side effects.

20 For a reliable and effective control, the Central Bank interest rate can be adjusted sufficiently often and with sufficient amplitude according to a stabilizing feedback rule. One possible interest rate rule is:

21 $\mathbf{r = (p + i)(e^{km/c} - 1)/(e^{k} - 1)}$ **The Hoglund Interest Rate Rule**

22 Where **r** is the Central Bank control interest rate, in percent/year, **p** is the rate of increase in the average labor productivity, in percent/year, (defined as; the rate of increase in average produced added

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real value per hour worked) in the economy, **i** is the rate of consumer price inflation, in percent/year, in the economy, **e** is the base of the natural logarithm, **k** is an adjustable, dimensionless 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 (or more precisely; the wear and tear corrected replacement production cost) of the stock of real assets in the economy.

23 For the natural capital which is not replaceable the replacement cost in the interest rule can be substituted with a cost based on a fundamental use value or rate of return.

24 In a very long-term perspective the natural capital could successively be repurchased by society and become common property and be lifted out of the interest rate rule and be rented out and/or used and/or cultivated without being allowed to function as a security for credit expansion. This can be viewed as a long-term reform for a more stable, efficient and fair economy in the future.

25 The residual stock of real assets which is neither real capital nor natural capital, and therefore is lacking both a relevant replacement cost and a defined use value, is so small that its price fluctuations can be ignored for the sake of simplicity.

26 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 the stock of real assets is equal to the replacement value (based on the corrected replacement production cost) then the rule sets the real interest rate equal to the rate of increase of the average labor productivity in the economy.

27 With the aid of the above proposed interest rate rule the price of the stock of financial assets in the economy can be strongly and reliably coupled to the total amount of underlying security, for example the replacement value (based on the corrected replacement production

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cost), of the stock of real assets in the economy – creating conditions for a stable and secure financial system with a balanced rate of credit expansion.

28 The governing principle is that a properly formulated feedback rule can take advantage of the collective analytic capacity of the market and reward those actors who can predict which price movements have a beneficial influence on the economic system and create conditions for long-term sustainable development. The principle affects the behavior of the actors in a market stabilizing and risk reducing direction.

29 When the strategy of the Central Bank becomes sufficiently trustworthy, both logically and psychologically, through an open monitoring of a sufficient set of properly selected economic indicators and through an open use of a sufficient set of properly designed control instruments, there is no longer any need for secrecy or unpredictable actions from the Central Bank to achieve the desired result.

30 No law of nature prohibits that speculation can become a good and stabilizing motivating force in the economy, only bad rules rewarding harmful behaviors.

31 When the interest rate is used to control the price of the stock of real assets the consumer price inflation can be controlled, and if so desired; eliminated, through the use of a variable, positive or negative, percentage control fee which is adjusted sufficiently often and with sufficient amplitude to avoid harmful imbalances in the economy.

32 A Value Added Tax could also be used to control the consumption, under the condition that it is made sufficiently agile and allowed to become negative when so required.

33 The consumption control can be made budget neutral by adjustment of the income tax in counter-phase. To make the adjustments efficient and fair the income tax changes should be made income neutral, in other words; result in the same percentage change for all.

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11 *The labor-productivity-compatible interest rate*

1 To create conditions for financial stability and to enable a fair and sustainable balance between the average time dependent financial reward for the provision of capital versus the provision of labor, the risk free real interest rate should reflect the rate of increase of the average labor productivity in the economy.

2 Under these conditions the average real wage (defined as; average real value per hour worked in the economy) can rise at the same rate as the average labor productivity (defined as; average produced added real value per hour worked in the economy) for an indefinitely long time, without having to cause harmful (increasing) inflation or other increasing financial imbalances in the economy.

3 With such an interest rate policy conditions are created where those who provide capital ('the capitalists'), which increases the labor productivity, can be rewarded in relation to their contribution in the economy. Simultaneously those who provide labor ('the laborers'), which makes the capital profitable, can also be rewarded in relation to their contribution in the economy – all parties benefiting in the process. Every other level of the risk free real interest rate and the growth rate of the average real wage, respectively, will, over time, cause an increasing financial imbalance to the disadvantage of one or the other party.

4 There are strong indications that the average real wage, even in developed economies, is still depressed below its optimal level but with an enhanced market economy with more demand and competition this can be corrected automatically in the future.

5 An important condition for long-term genuine price stability, in other words; zero inflation rate, without harmful side effects, is that the risk free nominal (net) interest rate is harmonized with, and reflects, the rate of increase of the average labor productivity in the economy.

6 Another important, but often disregarded, condition for long-term

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genuine price stability is that the rate of growth of the total volume of credit in the economy is sufficiently tightly coupled to the rate of growth of the stock of real capital (real assets) in the economy.

7 The concept of time preference and its influence on the interest rate, on the discount rate, on the distribution of consumption over time and between different generations has been the subject of a controversy among economists. In the light of the conditions and terms described above the controversy over time preference can be dismissed.

8 Instead of letting some arbitrary time preference determine the interest rate, and cause problems, the best solution is, on the contrary, to let the rate of increase of the average labor productivity determine the interest rate (and the discount rate) and accept this as the natural time preference of the economy or in other words; the time preference which the economy allows without becoming destabilized.

9 An simple example; a developing country undergoing a relatively rapid process of industrialization with a rate of growth of the average labor productivity of 8 percent per year would get serious problems if the risk free real interest rate in the economy were to be kept at 2 percent.

10 On the other hand, a developed country with a rate of growth of the average labor productivity of 2 percent per year would get very serious problems, of another kind, if the risk free real interest rate in the economy were to be kept at 8 percent – and this despite an ever so high expressed time preference and impatience among the population.

11 To claim that the market interest rate or the discount rate is determined by or ought to be determined by the time preference of individuals and/or that the time preference in the economy can be chosen at will is consequently a serious misconception.

12 In developed economies the labor-productivity-compatible interest rate could stay below 2 percent. A rate of increase in the average labor

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productivity, and an interest rate, of 2 percent per year may seem low but makes it possible to achieve a real growth per capita and an increase in the average real wage of more than 169 percent in 50 years, with unchanged working time, or makes it possible to reduce the working time, for example from 40 to less than 15 hours per week, if a shorter working time and perhaps a higher quality of life and a lower environmental load is preferred. Of course, a compromise between increased consumption and reduced working time is possible.

13 Even a lower rate of labor productivity increase and interest can result in amazing (exponential) growth in a long time perspective. A rate of labor productivity increase, and an interest rate, of a modest 1 percent per year for 1000 years opens the possibility, by definition, to achieve a real growth per capita and a real wage increase of more than 2 095 815 percent, without inflation or unfair financial imbalances, with unchanged working time.

14 Obviously such an extreme growth is physically impossible, with the same life style, technology and relative resource consumption as of today, for the next 1000 years. However, if the rate of innovation, knowledge increase, technology change and reduced environmental load is sufficiently fast, that is; of the order 1 percent per year, then such sustainable economic growth is, by definition, possible and could transform human life beyond the borders of imagination.

15 The conclusion is that even if the rate of labor productivity increase is relatively low the accumulated economic growth, in a long-term perspective, can become very high or the working time can be made very short. As mentioned above, it is also possible to make a compromise between growth and working time.

16 The low interest rate level in the examples above is very beneficial for long-term investments in a durable and environmentally compatible infrastructure and resource management. This improves the conditions

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to create a genuinely sustainable and fairer world with sufficient resources to sustain a high quality of life for everyone.

17 The average labor productivity is a relatively stable parameter in the economy. The main reason for this stability is the fact that the average labor productivity is the result and fruit of all available real capital as well as all technology, collective knowledge and experience that have been accumulated for a long time and the total quantity of labor-productivity-influencing factors will normally change only slowly. Another reason is the driving force of self-preservation to survive the competition by maximizing productivity to increase the profit of all business activities – both in good times and in bad times.

18 Despite the large difference in the rate of labor productivity increase between various sectors in the economy in a long-term perspective, especially concerning the production of goods compared to the production of services, the hourly wages in the respective sectors have not reflected this large difference. The dominating reason for this is the competition which has had a strong leveling effect, and limited the profit margin as well as the rate of increase in prices and wages in the most productive sectors, to the benefit of all other sectors in the economy.

19 An important condition for a fair average level of real wages in the economy is a sufficient demand for labor in relation to the supply of labor. This condition is often lacking in countries which are in the process of rapid industrialization and where the supply of labor, due to a large influx of people, in search for employment, into cities and growth centers, is much larger than the demand for labor and where the capitalists and/or entrepreneurs can exploit workers to the limit of starvation.

20 Often workers are paid wages so low that they can barely stay alive and they will still keep on working because the other alternatives are; no income at all or to move back to the village or small town they came

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from and for every worker quitting there are usually many willing to start working on the same terms. This reveals that the relatively high level of unemployment is not caused by a general unwillingness to work – not even under harsh conditions.

21 These unfair conditions and imbalances in the economy may last until the demand for labor has outgrown the supply of labor in the process of industrialization and every industrialized country has a more or less dismal history of such a relatively brutal transformation of its economy before the average wage rose to a higher, fairer level which gave more purchasing power to the majority. However, there are efficient and practical economic control instruments which can reduce harmful imbalances on the labor market, as well in developing countries as in developed countries, and optimize the supply of labor without adverse effects on development and growth.

22 The process can become more painful and lengthy if misguided, exogenous, trade-impeding counter measures are taken by already industrialized countries with the good intention of counteracting the unacceptable exploitation of labor in developing countries.

23 However, the development process is far from completed in the fully industrialized countries since the average rate of return and the level of profit in companies listed on the stock market are still considerably higher than the rate of increase in the average labor productivity. This is a sure sign that there is room for real wage increases which neither have to increase the prices nor the rate of inflation but instead can create a societally more beneficial and fair balance between the income from labor compared to the income from capital.

24 Increased real wages resulting in a higher utilized real purchasing power and demand, combined with a lower, more fair and sustainable, return on capital, increase the demand for labor and improve the conditions for higher rates of employment and production in the economy.

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12 *Measures for elimination of economic crises*

1 If the market value of the stock of real estate has dropped so much that the whole financial system is threatened, and the conventional monetary policy has become more or less impotent, for example through a liquidity trap, then buying of real estate should be subsidized so generously that the market price turns upward.

2 The need for the subsidy is temporary since the result of a sufficiently powerful action will be that the price of real estate will promptly begin to rise, which eliminates the need for the subsidy.

3 In economies with large differences in the relative price development between various local real estate markets the subsidy can be adapted to the needs of the individual markets.

4 A quick recovery of the price of the stock of real assets through the use of a sufficiently powerful economic reward subsidy system and then a stabilization, for example through the use of the proposed Interest Rate Rule, are some of the most important immediate actions in all countries suffering from uncontrolled price falls of real estate and other real assets.

5 With the aid of a certain amount of consumer price and wage inflation the price of the stock of real assets will in due time reflect the replacement cost without the need for unnecessary credit losses.

6 In extreme situations when the propensity to consume has been reduced to a harmfully low level there is always the possibility to introduce an adjustable consumption subsidy feedback.

7 If the subsidy rewards consumption to a sufficient degree it will elicit an increased utilization of private financial resources which can lift the economy with increased consumption, investment, production, employment and growth – even out of a depression.

8 If the rate of consumption and the demand becomes so high that the rate of production and the supply cannot catch up then the same lo-

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gic can be applied with a reversed sign so that that which previously were subsidies become fees and the fees become subsidies.

9 One of the advantages to control the consumption and demand with fees and/or taxes is that such measures do not increase the cost of production. The common Central Bank behavior, in such a situation, is to increase the interest rate which increases the cost and impair the conditions for investments, employment, production and supply.

10 Recessions and depressions caused by financial imbalances are unnecessary and harmful results of misguided macroeconomic control. There is neither any sound reason to let financial imbalances develop and grow nor to let the demand and the consumption drop to harmfully low levels since there are straightforward, practical methods both to avoid financial imbalances and to stimulate the demand, the consumption, the production and the whole economy in an effective and sustainable way without creating budget problems or inflation problems.

11 An economy which for some reason has been allowed to accumulate a large budget debt may be afflicted by speculation pushing up the market interest rate. This does not have to be a serious problem for a country with a sovereign currency and a Central Bank since it has full freedom to choose its own level of the interest rate to support a sound financial policy, rewarding desired behaviors in the economy.

12 Also in those cases where there is a large foreign debt, worsening the problems and the speculation, there are concrete, constructive measures to utilize the productive resources in the economy and to give the currency the possibility to find the level necessary to start reducing the economic imbalances without unnecessary delays and/or unproductive and destructive disturbances harming the economy and the people.

13 Even for a country with both the above mentioned problems combined with the lack of a sovereign currency and a Central Bank there is the possibility to solve the problems in an effective way.

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14 It is possible for all countries, and in all situations, to apply a constructive financial policy whose aim is to sufficiently forcefully reward desired behaviors in the economy, according to the principles described in this paper, and which increases the rate of investment, the rate of employment, the rate of production and the incomes while simultaneously reducing the budget deficit and/or the trade deficit so that the collective mistrust and fear and the destructive speculation can swiftly be eliminated and the confidence in the economy can be restored.

15 A properly designed tax system does not have to have a negative impact on the economy, on the contrary; it should, by definition, always have a beneficial influence on the incitement structure, the resource utilization, the rate of employment and the sustainability of the economy.

16 To increase the credibility of the economic policy and to dismiss the discussion about Ricardian equivalence the negative budget impact of all subsidies can be, if so desired, completely neutralized by the introduction of sufficiently large control fees and/or a sufficiently large increase in the income tax.

17 With some measure of innovative thinking it is even possible to design a tax and fee system which strengthens the budget at the same time as the economy is stimulated to increased employment and activity with emphasis on sustainable development.

18 This is a fact irrespective if the budget borrowing has been done domestically or abroad. The principle is the one previously indicated; namely to reward sustainable private consumption, per se, sufficiently while simultaneously the budget revenues are increased sufficiently.

19 A simple and effective way of stimulating an economy is to introduce a budget neutral redistribution of purchasing power. This can be done through an equally large increase of the income tax percentage for all incomes. The extra tax revenues are then preferably repaid through monthly cash payments to individual reimbursement accounts where

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the same amount is paid to all individuals.

20 The net effect of such a redistribution of purchasing power through an ‘equal tax reimbursement’ is increased demand and increased consumption stimulating to increased production and increased supply in the economy. The process has a positive influence on the rate of investment, the rate of employment, the incomes and the budget revenues.

21 Although a majority of the population will always benefit from a financial redistribution on these terms, which facilitates a democratically supported implementation, the additional tax treats every individual the same and exactly the same amount of tax is paid on every earned unit of money in a completely neutral way and completely independent of the person earning the money. In fact, an income tax can not be made more neutral and fair.

22 It could be advisable to start with a low level of the redistribution tax and then successively adjust it upwards in search for the optimal level. Of course, the optimal level will be subject to change as the economy develops, improves and grows but once the tax is established it can become of valuable economic instrument for fine tuning the economy and for optimizing investment, production, employment and growth.

23 Every Central Bank, with its own sovereign currency, has the power to control the term structure of the interest rate (the shape of the yield curve). This is a powerful monetary tool which requires sufficient knowledge about the interest rate, its influence on the economy and its qualities for good and evil, not to become destructive.

24 The theory that the monetary policy cannot affect the long-term level of resource utilization is a serious misunderstanding which sometimes has been used as an excuse for an unsuccessful monetary policy. One possible explanation to the misunderstanding could be the fact that inflation has little or no negative influence on the economy in real terms

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as long as it is sufficiently predictable. However, it is also fact that deflation has had a powerful negative influence on the economy in real terms on many occasions – even when it has been predictable.

25 ***Some thought-provoking questions:***

26 What would happen to the employment and the resource utilization if the Central Bank first, with a dangerously low interest rate, created an enormous asset price bubble and then, with a destructively high interest rate, made it collapse and result in a depression with persistent strong deflation induced by lack of demand?

27 In what way would the economy escape and recover from such a monetary stranglehold, with a cripplingly high, deflation-boosted, real interest rate rewarding destructive behaviors in the economy and how long would it take if the interest rate was not reduced?

28 What would the consequences be for the economy and for people if the misguided monetary policy were driven so far that the whole financial system collapsed?

29 In what way would the production losses, the capital destruction and the suffering be compensated so that the harmful effects of the monetary policy on the resource utilization, on the real economy and on people would be fully neutralized and eliminated?

30 Is it not a fact that the financial super crisis in the year 2008 was a result of a relatively long term, gradual accumulation of large economic imbalances which were made possible and which were allowed to grow due to the use of a blinder-equipped, misguided and obviously harmful monetary policy?

31 Finally; why is the generally applied monetary policy so forcefully and desperately defended, by its proponents, if it really is so insignificant in the long term, as they claim – and what is actually meant by long term in this context?

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13 *Measures against trade imbalances*

1 Every country with a Central Bank is fully capable to prevent a harmful accumulation of trade deficits. One way of doing this is through buying of currencies to such an extent that trade debts towards other countries are secured in the form of a trade debt currency reserve.

2 Such a strategy has a fundamental influence on the exchange rates and reduces the risk for an accumulation of destructive, financial and structural, imbalances which otherwise will cause unnecessary costs in the form of unemployment and capital destruction when they, sooner or later, are corrected. The imbalances are worsened by countries which willfully counteract a natural appreciation of their currencies despite a trade surplus.

3 The idea that a trade surplus is something positive and desirable is an age-old fallacy, with political influence, which is hard to eradicate and whose negative consequences will afflict both surplus and deficit countries due to the harmful warping of the productive infrastructure. The worst damage however will befall those deficit countries whose productive capacity has been impaired the most. Market corrections can strike suddenly and unexpectedly and with great force which increases the risks and the damages caused by the misguided economic policy.

4 Countries whose currencies have attained high status, and therefore have been used as reserve currencies in the Central Banks of the world, are especially prone to the risk of having their infrastructure seriously warped due to a decoupling of the currency from the real economy and the trade. Such trade imbalances can have extreme consequences and affect the whole world economy in an utterly destructive way when a panic driven correction suddenly begins and when the euphoria and greed is replaced by gloom and fear on the currency market.

5 An acceptance and application of the proposed trade debt currency

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reserve concept could result in a profound change in the behavior of the speculators on the currency market – where the analysis of and the respect for economic fundamentals need to be restored.

6 The absurdly high ratio of the financial turnover on the currency market to the real turnover in the world trade reveals that speculation has become the dominating activity on the currency market. This financial hyperactivity has a negative influence on the world economy since it is crowding out the fundamental relations between the real economies of countries.

7 Under certain, abnormal, conditions, for example those which have evolved in the euro zone, where some countries have accumulated a large trade debt, a trade control fee may be used, temporarily, to support the restoration of a healthy trade infrastructure.

8 To make the trade control fee sector neutral all that is needed is that the fee is the same for all imported goods and services. In other words; the same percentage fee should be paid on all imports. The fee can be used to improve the budget balance or alternatively be used to subsidize all exports equally if the intention is to make the trade control budget neutral.

9 The trade control fee is not some political fix which will harm the market economy. The purpose of the trade control fee is to reduce an acutely harmful trade and infrastructure imbalance which the market itself has created by lending money, at too low interest rates, to countries with too high inflation, within the euro zone, for many years.

10 The trade control fee is also not a permanent solution to the problem of trade imbalances. These problems need to be solved by proper control of the credit volume and the rate of credit expansion so that the average real wage, in the long term, can reflect the average real labor productivity and so that the rate of consumer price inflation and the rate of asset price inflation can be equalized within the euro zone.

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14 *The euro experiment*

1 The European Monetary Union is the largest currency experiment undertaken so far in the history of the world.

2 The monetary policy in the euro zone has been based on partially faulty assumptions.

3 In its present state the euro zone is lacking several essential stabilizing economic mechanisms.

4 The problems which have afflicted certain euro countries have not come as a surprise. The underlying conditions for the problems have been maturing gradually for almost a decade. A decade during which hardly anything has been done to avert a guaranteed confidence crisis in the euro zone.

5 Large budget deficits and/or booming real estate markets and/or rapidly rising wages and costs, in some countries within a currency zone, is not a recipe for a stable and healthy macroeconomic development and especially not when the safety net, which a sovereign currency implicates, has been taken away.

6 All the natural, destabilizing market forces existing within a country, with its own, unique, sovereign currency, also exist within each country of the euro zone but in addition to this there is a greater problem due to the differences between the countries in the form of different labor productivity, different tax systems, different pension systems, different finances, different rates of consumer price inflation, different rates of asset price inflation, et cetera. This can, in the long run, threaten the stability and even the existence of the currency union.

7 Even if the mobility of the highly qualified labor force is relatively high, the mobility of the great majority of the labor force is far too low to be able to function as a wage leveling factor between different countries.

8 Furthermore the thought that a high mobility of the labor force can

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function as a good leveler is fundamentally flawed since the associated necessary infrastructure cannot take part in the move between countries.

9 So even if the labor force could be extremely mobile this would not be a solution but instead cause serious disturbances with accompanying warping of real estate markets and financial systems both in countries with an outflow and in countries with an inflow of labor force.

10 The whole idea; to force individuals and groups to involuntary adaptation, migration and sacrifice in order to correct obvious systemic errors and imbalances, caused by politically enforced large scale economic experiments with suboptimal currency areas, needs to be questioned and scrutinized.

11 It has been claimed that the dangerous economic imbalances which have arisen within the euro zone is the result of an irresponsible economic policy in certain countries. Even if this is partly true the criticism misses the fundamental problem; namely the fact that the system has allowed economic imbalances to grow for such a long time without any natural stabilizing or restoring market forces.

12 The market reaction in the form of harmfully high market interest rates which is now at long last afflicting these countries is not an efficient economic stabilizing or restoring market force.

13 Since the market, as mentioned earlier, is suffering from an inherent destabilizing feedback the market rate of interest can be harmfully low for a long time and then, when the imbalances have grown so much that the problem suddenly is perceived as acute by the market, become harmfully high.

14 Reality has shown, overexplicitly, that the idea that the government should borrow on the market, to reduce the risk of an irresponsible economic policy resulting in budget deficits, is based on unrealistic assumptions about the qualities and behavior of the market.

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15 Budget-saving measures which are both psychologically and incentively misdirected and which result in a reduced rate of investment, a reduced rate of employment and a reduced rate of production are serious mistakes and worsen the problems in the economy.

16 The idea to borrow money, at a high interest rate, from those who have more money than they want to use for consumption aggravates the problems since that makes the rich even richer and therefore increases the purchasing power imbalance between the poor and the rich.

17 In its present form, with the present legal framework and current economic paradigm the European Monetary Union can probably only be preserved intact with a federal, supranational financial policy. If such an economic system is politically and democratically acceptable and viable nobody knows for sure.

18 However, despite the severe acute economic problems it is possible to make the whole European Union flourish with the help of a new economic paradigm, according to the above described principles. What is needed are new rules and a new incentive structure, utilizing the known and proven advantages of a market economy.

19 According to the method described in this paper it is possible to introduce a stabilizing economic feedback with control fees to balance and stabilize real estate markets.

20 Sector neutral control fees on the import and export of goods and services in each country can be used, as a temporary aid, to achieve balance in the foreign trade and a balanced infrastructure with respect to the size of the export sector.

21 Control fees on consumption can be used to correlate the rates of consumer price inflation between countries.

22 Control fees on credit can be used so that the net cost of risk free credit will reflect the rate of increase of the average labor productivity in each country.

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23 Every control fee can be made both market neutral and budget neutral by letting it become endogenous. This is achieved if a positive buying fee (control fee) is paid by the buyers on the market directly to the sellers on the market. If the buying fee is negative, which is equal to a positive selling fee, then it is paid by the sellers on the market directly to the buyers on the market.

24 Although the control fees in the long run should be budget neutral, it is advisable and beneficial for countries with a high budget deficit to use some fraction of the fees to reduce the deficit.

25 In the long run the spontaneously emerging futures markets (the secondary markets), for these control fees, can be directly coupled to the (primary) markets, which the fees are meant to control. In this process a new kind of futures markets are created, which could be defined as endogenous futures markets. These new markets can be used, if so desired, to gradually reduce the political economic control.

26 Without the support from a new and radically improved economic system several European countries will be exposed to many years of unnecessary suffering, unemployment and capital destruction. Even the most successful countries within the euro zone will be affected by negative side effects under such conditions.

27 The idea to let more responsible countries help less responsible countries to pay off their debt stems from a bad economic paradigm and creates an unsound incentive structure rewarding moral hazard and sending the wrong signals to taxpayers, as well as to speculative borrowers and lenders.

28 In conclusion; there are practical and efficient ways out of the European crisis without wrong signaling debt write-off, confrontation or conflict and without damaging the real capital, the natural capital or the human capital, in other words; without causing unnecessary capital destruction and suffering.

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15 *The pension challenge*

1 Demographic changes, mainly due to an increasing life span and a decreasing nativity among the population in most countries in the world, has increased the ratio between the number of people living on a pension and the number of people working. This ratio may continue to increase in the future.

2 The demographic changes have made most existing pension systems unsustainable. Little or nothing has been done to address the fundamental problem and many funded pension systems are in an acute need of reform and/or radical change.

3 History has also shown that funded pension systems often are subject to political abuse. This indication is so strong that the problem can be likened to a built-in systemic error.

4 There are three straightforward ways of solving the problems:

5 One measure is to increase the retirement age. This is natural since both the life expectancy and the state of health of people at the retirement age has improved.

6 Another measure is to reduce the size of the pension.

7 A third measure is to increase the pension fee or tax extracted from the working part of the population.

8 It is advisable to use a combination of all three measures so that the size and impact of each measure is reduced.

9 An unfunded, pay as you go, pension system has several advantages over a funded pension system. One major advantage is the fact that the pension problem, the political responsibility and the financial burden then cannot be ignored, procrastinated or rolled over to the next generation.

10 Another advantage is the simplicity, the high efficiency and low cost for a pure pay as you go pension system in comparison with the outcome-obscuring complexity and the high administrative cost for a

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fully funded, individual lifetime income-based, pension system.

11 A third advantage with a pay as you go pension system, coupled to the average wage in the economy, is the elimination of the unfairness problem which may occur when the growth of the pension capital deviates from the growth of the average wage in the economy creating unforeseen shifts in ratio of the standard of living between the working population and the retired population.

12 Finally; the idea that a funded pension system has a cost advantage is based on a misunderstanding of the workings of the real economy.

13 To place the full responsibility of saving for retirement on each individual may seem like a fair and ideal solution but this is wishful thinking since all individuals do not act responsibly and since there will always be a need for an economic safety net for people who are not able or willing to take the responsibility for their own retirement.

14 One way of solving this problem is to introduce a basic pension, the same amount for all, defined as a certain fraction, preferably in the range of 50 to 70 percent, of the average net wage income.

15 To begin with, before the tax system is fully optimized, the pension can be financed by a tax or fee on every income with an equal percentage for all levels of income. This principle of financing has the advantage to be both simple and efficient since it will treat all incomes the same and therefore does not result in an undesirable warping of the incentive structure in the economy.

16 The simple pay as you go pension system proposed above does not eliminate the individual responsibility and opportunity of every person to prepare for a life after retirement.

17 For those with low wages and for the long term unemployed such a basic pension system will enable an improved quality of life at retirement while the rich and/or well paid already are fortunate to have the means to save, invest and prepare for their retirement.

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16 *Measures against pollution and unfairness*

1 The conception that the environmental and resource problems facing humanity can be solved by informing and educating people to change their lifestyle and take a personal economic responsibility for the global problems is based on good intentions but unfortunately is it not only ineffective but also counterproductive since it has shifted the focus from, and delayed, the necessary improvement of the economic system and the elimination of the life-threatening systemic errors.

2 Growth can be made environmentally compliant, genuinely sustainable and to an increasing extent immaterial if the ownership, use and depletion of natural resources, including the emissions of environmental pollutants are charged with sufficiently high fees or taxes – maximizing the probability of the peaceful survival and development of mankind in a very long-term perspective.

3 A failure to promptly introduce such measures may result in dangerous energy and resource crises in the future with collapsing labor productivity and mass starvation with scary consequences.

4 To make high fees and taxes acceptable a repayment of a sufficiently large fraction is necessary, for example, through a reimbursement mechanism with a reimbursement account for every individual, or in other words; an account for regular repayment, in equal shares, to every person. Children could receive a certain fraction of the amount, preferably paid to their legal guardian.

5 A repayment on these terms is profitable for the majority of the population and results in a growth and employment promoting redistribution of economic resources and purchasing power.

6 Budget neutral (fully repaid) taxes or fees on CO2-emissions and other unwanted emissions can reward new markets with a large and growing benign demand resulting in a sustainable, global development – increasing the quality of life for all.

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7 It has been claimed that a global tax on CO2, which is sufficiently high to effectively abate the global emissions of CO2, must be harmful and impose a very high cost, due to a sharply reduced global economic growth. The truth is that every tax or fee in the economy is also a revenue in the economy and what determines the real economic result is how the redistributed money is used.

8 It is common, in model calculations of the effects of emission taxes on the growth of GNP, to ignore the fact that the GNP figure does not only include produced benign goods and services but also, to a large fraction, products and activities that are both unwanted and/or directly harmful. Therefore it is a serious mistake to believe that maximum GNP growth is the most important criterion when ranking different development alternatives.

9 The GNP concept needs to be down-prioritized to the advantage of some more meaningful measure of economic development or at least be critically scrutinized and evaluated in the light of relevant indicators of genuinely sustainable development and growth.

10 In conclusion; global economic growth and development can be made benign and sustainable by proper use of economic feedback control and by sufficiently often adjusted taxes and/or fees which are repaid to the consumers, according to the principles mentioned above. A new and effective way to find the optimal level of an emissions tax has been proposed by Sanctuary, M and Hoglund, A (2005), "A Flexible Pollution Tax".

11 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, would make it possible to successively abolish taxes and fees on other activities, both material and immaterial, which are beneficial for the long term survival of mankind.

12 In plain language this means that taxes and fees on, among others,

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financial capital, real capital and human capital, including labor, can be abolished. Such a tax reform would generate a positive economic quantum leap since the sustainable purchasing power, which creates a demand for long term sustainable and environmentally compatible products, under these conditions can reach its full potential which in turn will positively affect the economic conditions for research, innovation, investment, production, employment and genuinely sustainable growth.

13 Since the individual and automatic payment of sufficiently high taxes and/or fees, which will be an integral part of the price of all goods and services in the future, is directly proportional to the actual use and depletion of natural resources, including the actual harmful emissions, that each individual is causing directly or indirectly, the payment can be seen as an individual and personal economic responsibility-taking for the natural resources which every individual is using, spending and/or consuming.

14 The repayment of the taxes and/or fees, in equal shares to every individual, can be seen as a confirmation of the basic principle of universal fairness and is important for a general acceptance.

15 What is a fair resource allocation and what are fair rules and living conditions? Of course, there are no exact and generally accepted answers to these questions but You can ask Yourself the question about which resource allocation rules You personally would choose, if You were allowed to do so, under the condition that You had no prior knowledge about the conditions of the life You were going to be born to.

16 A well-considered and honest answer to this question from Yourself to Yourself, in the light of Your own conscience, can result in a decisive change in Your behavior towards other people and towards nature and make You aware that Your opinions, decisions and choices can become important contributions to a more just and constructive resource allocation and existence for all inhabitants on the planet Earth.

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17 *Literature*

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

2 Bernanke, B and Gertler, M (1999), “Monetary Policy and Asset Price Volatility”, Economic Review, Federal Reserve Bank of Kansas City, 4th quarter, 17-51.

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

4 Bernanke, B (2006), “Monetary Aggregates and Monetary Policy at the Federal Reserve: A Historical Perspective”, Speech at the Fourth ECB Banking Conference, Frankfurt, Germany, November.

5 Bernanke, B (2010), “Monetary Policy and the Housing Bubble”, Speech at the Annual Meeting of the American Economic Association, Atlanta, Georgia, January.

5 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.

7 Bordo, M 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.

8 Bordo, M and Jeanne, O (2002b), “Monetary Policy and Asset Prices: Does ‘Benign’ Neglect Make Sense?”, IMF Working Paper 02/225, International Monetary Fund, Washington.

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

10 Borio, C and White, W (2004), “Whither monetary and financial

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stability? The implications of evolving policy regimes", BIS Working Papers No. 147.

11 Bradford, D (1991), "Liquidation Cycles and great Depression", Harvard University and NBER.

12 Cecchetti, S, 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.

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

14 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.

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

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

17 Fisher, I (1933), "The debt-deflation theory of great depressions", Econometrica, 337-357.

18 Friedman, M (1960), "A Program for Monetary Stability", New York, Fordham University Press.

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

20 Goodfriend, M (2007), "How the World Achieved Consensus on

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May be copied if source is acknowledged

Monetary Policy", Journal of Economic Perspectives 21(4): 47-68.
21 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.
22 Greenspan, A (2002), "Economic Volatility", Speech at the Federal Reserve Bank of Kansas City's symposium, Jackson Hole, Wyoming, August.
23 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.
24 Hayek, F (1944), "The Road to Serfdom", University of Chicago Press.
25 Heikensten, L and Vredin, A (2002), "The art of targeting inflation", Sveriges Riksbank Economic Review.
26 Houben, A (1999), "The Evolution of Monetary Policy Strategies in Europe", Ph.D. thesis submitted to the University of Groningen, The Netherlands.
27 Illing, G (2001), "Financial Fragility, Bubbles and Monetary Policy", CESifo Working Paper 449, Center for Economic Studies and Ifo Institute for Economic Research, Munich.
28 IMF (2003a), "The move to inflation targeting", Finance and Development, June.
29 IMF (2004), "Global Economic Model: A New International Macroeconomic Model".
30 Keynes, J (1936), "The General Theory of Employment, Interest and Money", Macmillan Cambridge University Press, for Royal Economic Society.
31 Kohn, D (2006), "Monetary Policy and Asset Prices", Speech on March 16, 2006, www.federalreserve.gov.

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May be copied if source is acknowledged

32 Mises, L von (1953), “The Theory of Money and Credit”, Translated from German, Yale University Press.

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

34 Sanctuary, M and Hoglund, A (2005), “A Flexible Pollution Tax”, A report written on behalf of Nutek - the Swedish Agency for Economic and Regional Growth.

35 Svensson, L (2002), “Monetary Policy and Real Stabilization”, in Rethinking Stabilization Policy, Federal Reserve Bank of Kansas City Jackson Hole Symposium, 261-312.

36 Svensson, L (2005), “Monetary Policy with Judgment: Forecast Targeting”, International Journal of Central Banking, 1(1): 1-54.

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

38 Svensson, L (2009), “Flexible Inflation Targeting: Lessons from the Financial Crisis”, Speech given at De Nederlandsche Bank, Amsterdam, September.

39 Wicksell, K (1898), “Geldzins und güterpreise”, (Interest and Prices), English translation published by the Royal Economic Society, London, 1936.

40 Taylor, J (2007), “Housing and Monetary Policy”, in Housing, Housing Finance and Monetary Policy, Federal Reserve Bank of Kansas City Jackson Hole Symposium, 463-476.

41 Trichet, J-C (2003), “Asset Price Bubbles and Their Implications” in Hunter, W, Kaufman, 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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