Alan Greenspan, The Confidence Strategy

Edwin Le Héron

Brazilian Journal of Political Economy, vol. 26, nº 4 (104), pp. 502-517, october-december/2006

Alan Greenspan, the confidence strategy

EDWIN LE HERON*

To evaluate the Greenspan era, we nevertheless need to address three questions: Is his success due to talent or just luck? Does he have a system of monetary policy or is he himself the system? What will be his legacy? Greenspan was certainly lucky, but he was also clairvoyant. Above all, he has developed a profoundly original monetary policy. His confidence strategy is clearly opposed to the credibility strategy developed in central banks and the academic milieu after 1980, but also inflation targeting, which today constitutes the mainstream monetary policy regime. The question of his legacy seems more nuanced. However, Greenspan will remain 'for a considerable period of time' a highly heterodox and original central banker. His political vision, his perception of an uncertain world, his pragmatism and his openness form the structure of a powerful alternative system, the confidence strategy, which will leave its mark on the history of monetary policy.

Key-words: Monetary policy, credibility, confidence, fedspeak, uncertainty, Taylor rule.

JEL classification: E42, E50, E52, E58, E61, E65, N12.

Alan Greenspan is undeniably the central banker of confidence. To read the impressive array of literature addressing his 18-year reign at the head of the central bank of the United States, the famous Fed, one is convinced of it. Alan Blinder, one of his collaborators, has gone so far as to call him the best president that this institution has ever seen. He has gained the confidence of four presidents of the United States (three republicans Reagan, Bush Sr. and Jr., and the democrat Clinton), Congress, the financial markets and more generally the American population. Under his reign the United States experienced an era of prosperity. Greenspan succeeded in decreasing unemployment and inflation and possessed

* Institute of Political Studies, Bordeaux, France — CRECQSS — President of the French Association for the Development of Keynesian Studies (ADEK). E-mail: e.le.heron@sciencespobordeaux.fr. I would like to thank Emmanuel Carré (Institute of Political Studies of Bordeaux) and Randall Wray (University of Kansas City) without whom this text would never have been written and Michael Hughes for the English translation. Submitted: april 2006; accepted: may 2006.

an unfailing ability to avoid major financial crises. The few criticisms that are put forth do not seem to be capable of tarnishing his image. To evaluate the Greenspan era, we nevertheless need to address three questions: Is his success due to talent or just luck? Does he have a system of monetary policy or is he himself the system? What will be his legacy?

As history has already been written, we can provide answers to these questions. Greenspan was certainly lucky, but he was also clairvoyant. But can one really be lucky for 18 years? He won over confidence little by little and his words became evangelical, much like a guru, synthesizing confidence in his personality through his exceptional pragmatism, intuition and charisma. But above all, he has developed a profoundly original monetary policy, making himself a heterodox and extremely innovative banker. Heterodox not in terms of his economic ideas, for Greenspan has never been a great theorist, and his intellectual background is primarily Austrian,[1] but heterodox by way of this new regime of monetary policy that we will call confidence strategy. This confidence strategy is clearly opposed to the credibility strategy developed in central banks and the academic milieu after 1980, but also inflation targeting (cf. infra) which today constitutes the mainstream monetary policy regime in industrialized countries and the model sustained by Ben Bernanke the designated successor to Alan Greenspan at the head of the Fed. Greenspan, however, does not arrive with this new system in 1987, he develops it progressively with a break occurring in 1994; Blinder evokes at this point 'a quiet revolution'. The pragmatic Greenspan will systemize his approach as he goes along.

After so much praise of a man who succeeded in elaborating a new monetary policy regime and was successful in applying it, the question of his legacy seems more nuanced. On the one hand, a certain number of criticisms can be made. On the other, the originality, political know-how and an effective pragmatism are all qualities difficult to impart. Is it possible to do Greenspan without Greenspan? His confidence strategy will not be able to be replicated by a more powerful but less original theorist, and more economic (dogmatic?) than political practitioner like Bernanke.

WAS ALAN GREENSPAN GOOD OR JUST LUCKY?

The 18 years of the Greenspan era enabled the United States to enjoy an exceptional economic situation, particularly when one compares it to the crises

[1] After earning his MA in 1950, Greenspan became a 20-year associate of famed philosopher Ayn Rand. The philosophy of Ayn Rand is known as Objectivism and closed to the Austrian liberalism. Rand espoused a radical philosophy of individualism and self-interest. When she said that government has no obligation to the less fortunate, she became an icon to ultra-conservatives. She's been labeled a Social Darwinist who believed nature intended for the successful (strongest) to survive, and, unregrettably, the remainder might not survive.

of Europe or Japan. Economic growth was stronger than it was with his predecessor Paul Volcker. Inflation dropped from 3.9% in 1987 to 2% in 2005. Unemployment fell from 6.3% to 4%. In the Greenspan era it was on average 5.6% compared to 6.9% during the 18 years before. Thus practically full employment and a satisfactory stability of prices coexisted, a stark contrast to the mass unemployment in Europe and deflation in Japan. This development called into question the belief in a necessary arbitration between unemployment and inflation (according to the old Phillips curve). Finally, long-term interest rates decreased to historically low levels.

There is no doubt that Greenspan experienced a few moments of good fortune. He arrives in 1987 when a positive impact from the oil industry reduces the costs of production and therefore inflation. In 1995, a productivity boom linked to technological innovation ensures a few years of sustainable non-inflationary growth, even though it does not mean the emergence of the new economy that is hoped for.

However, one must not forget that he also encountered three major financial crises. Having just arrived in 1987, the United States experienced the biggest stock market crash since 1929. In playing the role of lender of last resort at the Fed, and creating the necessary liquidity injection, he renders the possible negative impact on the real economy essentially nil. Two years of strong growth will follow. Similarly, Greenspan does not hesitate to strongly intervene, lowering rates during the Russian crisis and the LTCM speculative hedge funds crash in 1998 against the expectations and advice of the rest of the FOMC.[2] Finally the bursting of the largest speculative bubble in American financial markets in 2000, aggravated by the terrorist attacks of 2001 should have plunged the country into a deep recession similar to that of Japan ten years earlier. Greenspan and the American Treasury will not hesitate to use highly active policies (lowering interest rates, increasing the budget deficit) in order to conserve a satisfactory growth rate.

The Fed lowers its official interest rate thirteen times until it reaches 1%, being less than inflation; the real rate (current nominal rate minus inflation) becoming negative. Greenspan accepts that the Treasury goes from a budget surplus to a large deficit, that is, an impulse of more than 5% of GDP. The american population, which has the bulk of its retirement funds in the form of investments, saw their wealth disappear with the fall of the stock markets. The danger would have been that it feels the need for major savings, pulling the breaks on consumption and growth. Investment would not have had any reason to offset this fall in consumption with the perspective of weak demand and after already five years of strong investment. In order to counter this negative wealth effect for the american population, Greenspan does not hesitate to feed a speculative bubble in the housing market in such a way that americans earn there what they would

---

[2] FOMC (Federal Open Market Committee) is the authority responsible for monetary policy at the Fed, LTCM (Long Term Capital Management) highly speculative funds managed by two Nobel Prize winning economists, which practically collapsed in 1998.

lose in the stock market. Mortgages granted by the banks and developing with the significant decrease of interest rates were able to continue, as they were considered to be priorities by the Fed. It would also seem that at that time investors of retirement funds, certainly those managed by the treasury, did not hesitate to buy in bulk the few shares (30) of the Dow Jones index, thus manipulating it so that it only fell slightly. The last measure was the controlled decrease of the dollar in order to boost exports and assure competitiveness. All of these policies work together to avoid the risk of deflation notably in 2003 and maintain a rate of growth envied by the Japanese and Europeans. A successful soft landing for the moment.

Thus Greenspan all too often took the right measures, frequently diverging from the dominant opinion, leaving only luck to explain the results. For example, in 1995, he was the first to detect the positive impact of productivity, which enabled him to anticipate before anyone else strong non-inflationary growth and job creation. Economists and other members of the FOMC did not notice this change in trend until 1999. Greenspan was not just lucky he was clairvoyant.

ALAN GREENSPAN'S CONFIDENCE STRATEGY

Behind a clear sense of pragmatism, the monetary policy of Greenspan is based on a truly original strategy. It breaks not only with the old discretionary policy systems of Keynesians (before 1975) and the respect of the Monetarist k% rule deriving from the quantity theory of money (before 1982), but most importantly with the contemporary systems which dominate in other central banks, that is to say credibility strategy and inflation targeting. Thus rather than the old debate about rule *versus* discretion, it is more credibility *versus* confidence which characterizes the Greenspanian system. Before clarifying the heterodox regime of Greenspan, let us recall the dominant systems of credibility and inflation targeting.

Credibility and inflation targeting

The credibility strategy, which develops in the 1980's with the objective of definitively condemning Keynesian discretionary practices while proposing an alternative to the monetarist quantity theory of money, would turn out to be impossible to implement. It can be summarized thus: There exists a natural model of the economy from which one can deduce a long-run unique equilibrium. From the respect for this model comes the necessity of a monetary policy rule that is clearly announced by the central bank, in this way committing itself to respect the rule (unconditional commitment). In order to enforce the commitment, incentive-compatible mechanisms and an institutional design are specified, the most famous being the necessary independence of the central bank from the political power. If total transparency on the part of the central bank is added to this chain, so as to demonstrate its respect for the underlying natural model, the central bank will then be credible and its policy effective. The sequence of a credibility strategy is therefore the following: unique equilibrium model — rule — commitment to respect the rule — independence — transparency — credibility.

The credibility literature begins in 1977 with Kydland and Prescott. The rule is justified by the time-inconsistency of Keynesian policies, which leads to an inflation bias. This argument is transcribed into the Friedman-Phelps expectations augmented Phillips curve and leads to the definition of a natural rate of unemployment, which is non-inflationary: NAIRU (Non-Accelerating Inflation Rate of Unemployment). In 1983, Barro and Gordon introduce 'reputation' and show how institutional set-up is more important than the rule. Rogoff in 1985 develops 'strategic delegation' of monetary policy to an independent central bank lead by a conservative central banker. Walsh (the contracting approach in 1995), Svensson (1997) or Woodford (2003) have continued to develop this approach greatly influenced by New Classical Economics.

From the critique of this extremely orthodox approach, inflation targeting emerged in New Zealand in 1989 before spreading to the vast majority of central banks to become what is today the dominant model. Inflation targeting is above all a policy framework (announcing an explicit inflation target and a commitment to respect it with the possibility of sanctions) and a strategy of communication and transparency. Inflation targeting is at once the final objective and instrument of monetary policy. The goal is to anchor agents' inflation expectations on the proposed target. For if the agents use the target put forth by the central bank as their expectation, the target will be achieved; thus it is a self-fulfilling target. Inflation is largely explained by the expectations of agents, an expectation phenomenon which becomes the privileged transmission channel of monetary policy; hence the importance of communication. Inflation targeting is based on the New Consensus current among central bankers: in the long term, inflation is the only variable controlled by monetary policy, price stability is the best possible contribution to growth (more than the quest for full employment).

Greenspan's strategy hinges on three axes: uncertainty is the defining characteristic of the monetary policy landscape, the importance of politics and a strong pragmatism. As Greenspan affirms, uncertainty is not an element in the environment of monetary policy it is the environment itself. For him, a central banker is a politician before being an economist. This is the fundamental challenge of central banking in a democratic society. Finally a good monetary policy requires experience and pragmatism; it is more an art than a science.

Uncertainty is the fundamental problem

Uncertainty develops in four directions: the uncertainty of events, an adequate theory, the behavior of actors and the right decision to take.

For Greenspan, future events are not known and cannot be deduced from past events. Monetary policy must always be forward looking. Econometric models are only of marginal help because they only provide the most probable averages of variables, and are incapable of apprehending the ruptures that necessarily occur. The world is dynamic, in perpetual change, even though it is endowed with a strong resilience, that is to say a capacity to support crises. The influence of Austrian thought shows through. Thus, Greenspan is interested above all in unlikely events, which could provoke turmoil. In 1984, he was one of the chief economists at the White House. On one occasion when presented with a highly sophisticated econometric model he responded, *'Do you seriously believe that this captures what is going on now?'* (Greenspan in Hargrove, 1984, p. 437). If the future were only the extension of past tendencies, monetary policy would be uncomplicated and could follow a fixed unconditional rule. But this is not the case. From then on he forsakes traditional models of optimization of central bank behavior for his famous paradigm of the balancing and management of risks.

Greenspan (2004, p. 37) describes risk management thus:

> 'emphasizes understanding as much as possible the many sources of risk and uncertainty that policymakers face, quantifying those risks when possible, and assessing the costs associated with each of the risks.'

And Svensson (2005, p. 14), discussing the discourse of Greenspan in 2004, writes:

> 'The key to what he called the risk-management approach to monetary policy is the Bayesian theory of decision-making…[which] begins by identifying all of the different possible "states of the world"… and assigning a subjective probability to each state… For each potential outcome, it is then in principle possible to calculate the expected utility of the outcomes, using the subjective probabilities… The optimal policy is the one with the highest expected utility'.

The balance of risks is the operational translation of the dual mandate. The balance is between the risks of the two goals of stable prices and sustainable economic growth. It differs radically from the New Consensus on price stability as the primary goal of monetary policy. It is also in sharp contrast with Rogoff's conservative central banker that puts more weight on inflation than on output. This implies preferences different from society. In the balance of risks, there is potentially equal weight, so that the democratic deficit of the conservative central banker is reduced.

Greenspan seeks the most prominent risk at a given moment for the objectives of the monetary policy and he concentrates on that. Even if a hypothesis is unlikely, it is necessary to deal with it if its occurrence could cause considerable damage. In 1998, he will lower interest rates despite contrary views at the FOMC in order to prevent the collapse of LTCM speculative funds from provoking a major financial crisis. The balance of risks requires a sort of index of risks to measure at once the probability of a risk occurring, its dangerousness, and how much it could lag. A judgment must be made concerning the probability of events: *'in essence, the risk management approach to monetary policymaking is an application of Bayesian decision-making'* (Greenspan, 2004, p.38). It is then necessary to establish several scenarios (at this level, econometric models can be used) and analyze their consequences. It means assessing the costs of risks, hence a cost-benefit analysis. According to Greenspan, risks are often asymmetrical: a central banker must be ready to respond to low probability events. The famous 'insurance policy' protects against severe outcomes, that is, events with high costs. Finally, the risk management strategy should be consistent with the achievement of the dual mandate.

The second axis is the uncertainty of theories. Greenspan is neither theoretical nor dogmatic. He does not believe that a single model is essential, even for the long term. He considers to be more important the source of uncertainty that multiplies parameter uncertainty: model uncertainty. According to Greenspan models are always imperfect representations of reality, partly due to the frequent structural changes in the economy. That is why decision-making cannot only rely on models, and requires data monitoring. The model must always be modified if conditions change; indeed conditions are always changing. Models must always be in accordance with the evolution of data. He envisages a dynamic world where the ability and speed of adaptation are qualities of the utmost importance, much more than a command of static theoretical apparatuses. He therefore privileges openness. For Greenspan, flexibility is much more important than credibility. Not being a theorist helped him to remain open; he often ironically refers to improbable variables as belonging to academic analysts.

The third kind of uncertainty is strategic uncertainty. It concerns the behavior and expectations of the different actors, households, entrepreneurs or participants in the stock market. Seeing as Greenspan does not believe that the central bank and its actors share a common knowledge of a single common model of the economy, which is more a hypothesis of rational expectation which reduces to zero the role of political economy as with new classical economists, he prefers the idea of a common understanding of the economy. Without a common a priori knowledge or rule, this common understanding has to be built so that agents adopt the same vision as the central bank. This is an interactive learning process that is built over time, and adapts to developments in the economy. It requires an elaborate communications strategy, not just the simple requirement of transparency. Greenspan prefers openness. It is necessary to explain and convince agents that the point of view of the central bank is the right one. If agents see things in the same way as the central bank, its vision will dominate, and the policy will be effective. A monetary policy cannot work against agents, nor impose itself on them; it must work with them. Central banks are statues with feet of clay. The problem is not credibility but confidence.

In order to attain this confidence and so that the game functions, which in a certain way is a matter of (reciprocal) manipulation, it must appear to be a win-

win situation; that is to say that the agents or the financial markets have an interest in reducing their own uncertainty (of rates or inflation) by trusting in the strategy of the central bank. This can sometimes resemble a cat and mouse game; without knowing that the central bank is always the cat. In order to play this cooperative game, the central bank must respect the concerns of the agents which are not all identical, and which must therefore be hierarchized in importance and over time. The choice of a dual mandate respecting both employment and growth and not only an explicit objective of inflation is necessary. The limit of this approach is of course to appear as a kind of guru, with confidence only personally anchored, that is, Greenspan as system. He always protected himself against this, but he often pushed the limits.

The last level of uncertainty concerns decision-making. Contrary to the dominant thinking, Greenspan has always vigorously refused the idea of a rule. According to him no rule can stand the test of time. When following a rule, a good central banker is one who understands when and how he must change the specifications. Here we find Greenspan's balance of risks and not the optimization of loss function, which is considered to be stable for the middle term. Modern rules like those of Taylor can only be explained *ex post* and do not constitute a real *ex ante* decision-making tool. Taylor (2005), moreover, recognizes this. Greenspan advocates an activism, a discretion, which has the purpose of managing the arbitration stemming from risk management.

Risk management is an original decision-making process under conditions of uncertainty. It is based on the rejection of the Knight dichotomy. As Greenspan puts subjective probability on events, everything is uncertainty. According to Greenspan, it is essentially a Bayesian approach. In line with its emphasis on a model of uncertainty, this econometric foundation of Greenspan's standard is compatible with a particular robust technique: robustness to different models (Levin, Wieland and Williams, 1999). This sort of Bayesian model averaging method differs from the standard theory of robustness: the MinMax robust control theory of Hansen and Sargent (2005). The latter requires a unique model, the 'approximating model'. On the contrary, Greenspan does not consider robustness within a benchmark model, but across models.

From this approach follows a certain number of fundamental principles typically Greenspanian.

Greenspan's principles

In the first place, as there is uncertainty regarding the impact of monetary policy decision, a certain gradualism is required. Greenspan will be called Mister 25 points (0.25%), because of his insignificant rate changes. Indeed, he believes that it is better to advance little by little, with the aide of a communications strategy in order to clarify the object of the action and improve its efficiency. For Greenspan, communication becomes an instrument of monetary policy. In the same way that one speaks of a policy of open market (the intervention of central bank currency in the market), he speaks of 'open mouth' policy. A good communication has a multiplying effect on the direct action of the interest rate. Smoothing allows for less drastic rate increases by making them more effective, but also allows more opportunities to make adjustments to policies in the case of errors. Uncertainty comes from events; it must not come from monetary policy. In order to indicate an important change of course a decision of 50 points (0.5%) is sufficient.

Thus smoothing and communication are supposed to reduce the uncertainty of the behavior of the central bank. To this end, Greenspan will adopt a practice now common in central banks: the limiting to 8 meetings a year when the FOMC would be able to decide a change in the rates, that is, every month and a half. The dates are known in advance (the ECB adopted 12 dates). This is exactly the opposite of the surprise effect and daily modification of rates dear to monetarists. Between these 8 meetings, uncertainty decreases and the central bank takes advantage of this time to communicate its understanding of the situation, but also the most likely scenario to come and therefore the evolution of rates *'for a considerable period of time'*, in order to reduce the asymmetry of information during a change of course. They use the inter-meeting period to prepare the markets, with an appropriate wording: the Fedspeak. The variation of interest rates is used more as a signal to economic agents than for its direct effect on monetary creation or investment. The Fedspeak makes communication a full instrument of monetary policy. This communication cuts back on interest rate actions: there is no interest rate movement during this period. In the Greenspan strategy, communication and the interest rate are complementary instruments. It also implies that the leading transmission channel of monetary policy is that of expectations and not the traditional interest rate channel.

Greenspan also insists on the importance of preemptive hikes. Indeed there exist significant lags on the transmission of monetary policy (of about 18 months) hence the importance of making decisions today that reflect the reality of tomorrow. In striking early, preemptive action also reduces the sacrifice ratio,[3] effects expectations and demonstrates its determination therefore building its reputation. Monetary policy becomes more effective.

A final original trait comes from his definition of inflation (price stability). For Greenspan, inflation occurs when agents modify their behavior in reaction to it, that is to say when they are thinking about inflation. This behavioral and subjective definition prevents him from acknowledging an explicit definition of a target. For Greenspan, struggling against inflation of 2% is pointless if agents do not recognize it as a problem and are not thinking about it. In focusing communication on explicit targets, one risks creating a problem of inflation where there isn't one. This powerful critique of inflation targeting is not shared by his successor Bernanke. An implicit target is more flexible and allows a higher level to be sustained than an explicit target to which all attention is focused.

---

[3] When the balance of risks has chosen an objective (for example inflation), the sacrifice ratio measures the impact on the other objective of the dual mandate (full employment).

The importance of politics

We arrive at the second Greenspanian problematic, the challenge of central banking in a democratic society. Greenspan refuses the full independence enjoyed by the ECB. Central banks cannot base their legitimacy on the respect of a rule nor the single explicit objective of inflation. Only politics provide democratic legitimacy. The political authority delegates monetary authority to the central bank within the frame of a mandate. The Humphrey-Hawkins mandate was fixed by Congress in 1977 and has remained ever since. It focuses on three objectives: full employment, price stability and a weak long-term interest rate. The third objective complements the first two: indeed the absence of the expectation of inflation lowers long-term rates, which then favor investment and employment. It is therefore a kind of dual mandate. In a democracy, monetary policy must concern itself with the desires of the electorate and employment appears to be their number one concern. The Fed chooses independently the instruments of its monetary policy, not its objectives; it is a creature of congress, unlike the ECB, which is a creature of central bankers.

Faced with this mandate, the central bank must accept a high level of accountability. It must be accountable to the political authority, in that its strategy must respect the mandate. In the case non-respect, sanctions are possible. Congress can dismiss the president of the Fed unlike at the ECB. For Greenspan, this accountability takes the form of a strong communication and limited transparency. A transparency, which is not linked to credibility (to demonstrate that one respects the shared model), but to the requirement of democracy, to the legitimacy of its action. A total transparency would risk weakening the central bank's efforts to anchor the expectations of agents. One must open the window, but not the door. Greenspan made much progress in this respect. In 1987, he admitted to have learned to mutter incoherently: *'Since I have become a central banker, I have learned to mumble with great incoherence. If I seem unduly clear to you, you must have misunderstood what I said'*. Fedspeak was famous for its incomprehensibility. After 1994, he learned that clarity strengthened his policy and constructive ambiguity was abandoned.

Greenspan always demonstrated political know-how and was at ease when discussing with politicians. He devised a combination of monetary and budget policies spontaneously cooperative with the Treasury. However at the Fed he exercised true leadership. This strong personalization of authority always allowed him to impose his own views.

Pragmatism, experience and openness

The Greenspan approach is based on a pragmatism founded on the progressive elaboration of a number of practices, which become systemized into an original regime of monetary policy after 1994.

In addition to refusing an automatic rule of behavioralism, Greenspan never believed in the 'divine coincidence' (Blanchard, 2003) of the consensus of New Keynesians and of course defenders of inflation targeting. According to them, price stability becomes the necessary and sufficient condition for full employment according to a hierarchical mandate which priorities price stability. In a dynamic and uncertain world, judgment and discretion are primordial; the dual mandate is preferable. A good central banker must be capable of identifying in the data a possible rupture or a change in progress. Greenspan was famous for locking himself up with a data set a few hours before the FOMC meetings, then emerging with a perspective and an analysis that other members could only identify much later. He monitored closely a large number of indicators, but attached almost no importance to the monetary aggregates that constitute the pillar of monetary policy-makers. Blinder recounts that months would go by at the FOMC without any mention of monetary aggregates. When Greenspan alone understood in 1995 that the trend in productivity was changing to an increase, he did not hesitate to seek a historic non-inflationary full employment (3.8%) against all the Cassandras who were predicting a return to inflation.

The first principle is his intention to stabilize the short-term real and non-nominal interest rate. To do this, he needed a neutral rate for which he does not provide any precise definition. In general, one does not know what it is until it is reached: '*You can tell whether you're below or above, but until you're there, you're not quite sure you are there…When we arrive at neutral, we will know it*' (Andrews, 2004). It has nothing to do with Woodford's pseudo Neo-Wicksellian rates. It seems to me that we can call it a NAIRRI like NAIRU, that is to say a non-accelerating inflation real rate of interest. The Taylor rule[4] of Greenspan can be written thus:

$$(r - r^*) = \alpha\,(\pi - \pi^*) + b\,(u - u^*) + \varepsilon_t$$

r = Nominal interest rate determined by the monetary policy

r^* = Neutral rate or NAIRRI

π = Underlying rate of inflation expected in 18 or 24 months in order to take into account delays in the monetary policy action

π^* = Implicit inflation target which depends on behavioral data (3% rather than 2%)

u = Rate of unemployment or rate of economic growth y

u^* = Rate of full employment or potential growth y^*

α = Coefficient of the reaction of the interest rate to inflation gap

b = Coefficient of the reaction of the interest rate to employment or production gaps

α and b are determined by the balance of risks

[4] The initial Taylor rule (1993) is: $r = \pi + 2 + 0.5\,(\pi - 2) + 0.5\,(y - y^*)$, with π inflation, inflation target of 2%, $\alpha = b = 0.5$, real interest rate of equilibrium = 2%, r = interest rate, y =production and y^* = the potential production.

We see again the dual mandate: price stability and full employment. The expected inflation must approach as much as possible the implicit target of price stability and employment of potential full employment that Greenspan does not liken to the NAIRU, a concept he thinks very little of as productivity is far from being constant. If the two objectives are reached, the nominal interest rate can be considered to be neutral r*. Thus the right monetary policy is the one that renders the three gaps nil: inflation, unemployment and interest. Greenspan's Taylor Rule is an original one.

For Taylor the neutral interest rate is 2%, while for Greenspan it is more of a residual value that can only be known once it is reached. Greenspan does not follow Woodford either who makes r* the central variable of monetary policy, the real interest rate gap resolving itself the other two gaps (inflation and unemployment). But above all, Greenspan does not believe in the divine coincidence of the consensus of New Keynesians, especially the defenders of inflation targeting. In a certain way, they integrate into the Taylor rule a new Phillips curve[5] where inflation and unemployment are integrated by their difference with their potential value of equilibrium. p* becomes the explicit inflation target (supposed to be the stability of prices) and/or the expectation of agents (anchorage). For according to the new Phillips curve, the stability of prices ($\pi - \pi^* = 0$) becomes the necessary (primary objective) and *sufficient* condition of full employment ($u - u^* = 0$). The stability of prices would be the best possible contribution to growth. The mandate would then be hierarchical; the monetary policy would become again optimization. At the very limit, we could avoid the output gap of Taylor's rule (Batini and Haldane, 1999). Greenspan has never given credit to this divine coincidence.

For Greenspan, risk management requires calculating each time coefficients *a* and *b* which are not considered to be stable. Changes in the balance of risks lead to a non-linear reaction function, far away from New Keynesian linear rational expectations models. He takes up the Taylor 'more than one' principle, that is to say the interest rate as a precaution must increase more than inflation ($\alpha > 1$). But Greenspan is an activist; in the case of the risk of recession, a vigorous reaction to the output gap is necessary. In this case, $b > 1$. We understand that Taylor's rule is anything but an automatic decision of monetary policy and that its major principles translate for Greenspan into: dual mandate, balance of risks, behavioral definition of inflation, discretion, openness.

Greenspan has been criticized for his asymmetric approach to the speculative bubble of the 1990's. He is said to have not acted during the market boom, but energetically intervened during its bust. Should he have taken pre-emptive action? For Greenspan, it is not his policy, but the bubble, which is asymmetrical, always growing gradually, without anyone knowing for sure that it is really a bubble,

---

[5] NKPC: New Keynesian Phillips Curve is written: $\pi = ß\, \pi^e_{t+1} + k\,(y - y^*)$ with π as inflation, π^e the expected inflation, y production, and y* potential production.

before bursting. Furthermore, he does not believe that monetary policy can stop bubbles from inflating. The expected gains are such that even a strong increase of interest rates would not be capable of reducing them. Rate policy is therefore ineffective; it would kill the economy before killing the bubble. Only a policy of communication could work, but Greenspan noticed that during these episodes, speculators remained deaf, convinced that they could jump off the train before it crashed. A mere illusion. Thus it is more effective to wait for the bust and help the economy achieve a soft landing. The members of the FOMC shared this point of view.

THE LEGACY OF ALAN GREENSPAN

A new strategy of confidence

Little by little, Alan Greenspan established an original monetary policy regime which runs contrary to those currently dominant among central bankers: credibility and inflation targeting.

Concerning credibility, Greenspan believes neither in a theoretical model stable over time and which explains a single long-term equilibrium shared by all, nor in the temporal incoherence or inflationary bias of an active policy. He refuses the definition and the applicability of a rule, a single mandate centered on inflation, the requirement of transparency and total independence of the central bank.

However, Greenspan defends risk management, the dual mandate stemming from politics, pragmatic activism, limited transparency, openness and strong accountability on part of the central bank to fulfill its mandate.

In an uncertain world, he privileges discretion over the rule, flexibility over anchoring, legitimacy over credibility. Greenspan's confidence strategy can be summarized thus: uncertainty — governance — dual mandate — accountability — risk management — openness — communication — mutual understanding — confidence.

As for inflation targeting, Greenspan refuses its hierarchical mandate, a communication and a policy essentially focused on an explicit inflation target. Furthermore he contests the obviousness of the definition and legitimacy of the Humphrey-Hawkins mandate: *'For all these conceptual uncertainties and measurement problems, numerical inflation target would represent an unhelpful and false precision'* (2001, p. 3). All the more so if the central bank misses its target, its whole strategy and credibility would sink. Greenspan (2004) considers that recent developments in the inflation targeting regime show that is increasingly close to the strategy of the Fed, so there is little reason to adopt the inflation targeting regime. The development in inflation targeting from strict IT to judgment IT (Svensson, 2005) seems to prove Greenspan right. Moreover, Greenspan considers that the inflation-targeting regime is not sufficiently flexible to confront an ever-changing economy with structural changes. He concludes that the risk management paradigm is the more appropriate strategy to deal with an environment of uncertainty. Contrary to what Bernanke announced to the Senate, inflation targeting is not soluble in Greenspan's confidence strategy.

Greenspan resisted orthodox regimes, but he was not alone. He was strongly supported by a team at the heart of the Fed board (Kohn, Gramlich, Ferguson) and on the outside (B. Friedman), all opposed to inflation targeting. On the board only Ben Bernanke supported targeting and gradually began to reproach Greenspan (perhaps a year too soon). The real supporters of targeting are situated outside of the Fed (Goodfriend, Mishkin, Svensson, McCallum). As Greenspan had himself pronounced his opposition to this strategy in 2004, the choice of Ben Bernanke makes it difficult to identify a legacy.

The critique of the Greenspan era

Greenspan's confidence strategy and his results are indeed praiseworthy. His reputation in the world is excellent and criticism is usually secondary or unsuitable. For example, it would not be right to criticize him for the exaggerated role of the dollar in the world or the abysmal interior and exterior deficits of the United States. These real concerns are of no relevance to the mandate of the Fed. However a certain number of legitimate criticisms can be made. I will mention four.

The first critique concerns what little theoretical contribution Greenspan has made. Little interested in theory, he does not hesitate to use vague concepts and affirms the theoretically inverse of what he decides in practice. If his activism has nothing to do with Keynesianism, he never felt imprisoned by his orthodox thinking. Unlike his successor Ben Bernanke, a theorist, Alan Greenspan is a practitioner.

The second critique concerns the fact that his personality constitutes the larger part of his system: pragmatism, intuition, openness, and charisma; characteristics difficult to pass on. His ability to question the certainties of the academic milieu has no doubt been enhanced by his experience and his theoretical pragmatism. His system exists, but who will dare to apply it? Greenspan's success owes much to an anchoring to his very personality. His leadership was strong. Confidence was achieved more by Greenspan than the Fed. We must remember that long rates rose 1% during his tenure, proof of the weak confidence in him at that time. It is understandable that his successor is not comfortable with this legacy and prefers the more conventional framework of inflation targeting to Greenspan's heterodox confidence system.

There were many, such as Paul Krugman, who reproached Greenspan for meddling in affairs out of his reach, such as expressing his views on social or fiscal policies of the government; for example when he approved the harsh social policies of George Bush. Blinder and Reis (2005) insist that this endangered the independence of the Fed. If the Fed intervenes in the policies of the Treasury, the Treasury will be able to legitimately intervene in monetary policy. This critique is well founded but not in terms of Greenspan's psychology which sees himself as above all a politician who is responsible for a monetary policy that he believes is connected to the rest of political economy.

Finally, Greenspan leaves behind a macroeconomic situation far from stable. With another significant rise in short rates in order to confront an announced risk of inflation, Greenspan could burst the housing bubble that he contributed to inflate to counter the fall of the financial markets. What is more, this rise ought to cause a decrease in the financial markets, which could produce a perception of a loss of wealth for American households encouraging them to save to reconstitute their savings, which would halt American growth. Especially since the drop in the dollar has reached its limits without risking a loss of confidence in this hard currency and an increase in the price of petrol. For the moment this policy has been neutralized by a worldwide excess liquidity (originating for the most part in Asia and fed by American deficits) and have blocked any increase in long rates. Although short rates have more than doubled, long rates have not changed so much as to have alarmed Greenspan who has described this situation as 'market conundrum'. We can also see here such a confidence in his own abilities to suppress inflationary tensions that long term inflation expectations have not moved, long rates remain stable. Nevertheless the quasi-equality between short rates and long rates still pose serious problems. On one hand, they seriously weaken the profitability and equilibrium of banks (which borrow at short rate and lend at long rate). On the other hand, it removes all margin of maneuver for monetary policy making the pursuit of increases perilous while neutralizing its present effects on inflation. It is true that it is no longer his problem. Good luck Mr. Bernanke!

Greenspan will remain for a considerable period of time a highly heterodox and original central banker. Everyone criticized him: Keynesians, monetarists, New Classics, Post and New Keynesians and even central bankers. His political vision, his perception of an uncertain world, his pragmatism and his openness form the structure of a powerful alternative system, confidence strategy, which will leave its mark on the history of monetary policy.

REFERENCES

The Greenspan Era: Lessons for the Future, (2005), the Federal Reserve Bank of Kansas City symposium, Jackson Hole, Wyoming, August 25-27, www.kc.frb.org

ANDREWS, E. L. (2004) "Greenspan Says Rates Could Rise Quickly", *New York Times*, July 21.

BATINI, N. and Haldane, A. (1999), "Forward-Looking Rules for Monetary Policy", in Taylor, J., ed., (1999), *Monetary Policy Rules*, The University of Chicago Press, pp.157-92.

BARRO, R. and Gordon, D. (1983), "Rules, Discretion and Reputation in a Model of Monetary Policy", *Journal of Monetary Economics*, 12: 101-21.

BERNANKE, B., (2005) Testimony of Ben S. Bernanke, Nomination hearing before the Committee on Banking, U.S.Senate, november 15, www.federalreserve.gov

BLANCHARD (2003), "Comments on Inflation targeting in Transition Economies: Experience and Prospects by Jonas and Mishkin", April.

BLINDER, A. (1999) ,*Central Banking in Theory and Practice*, (Cambridge, MA: MIT Press).
BLINDER, A. and R. Reis (2005), 'Understanding the Greenspan Standard', *CEPS Working Paper*, no. 114
GREENSPAN, A. (1989), Statement and additional material in hearing before the Subcommittee on Domestic Monetary Policy of the Committee on Banking, Finance and Urban Affairs, U.S. House of Representatives, 101st Congress, October 25, Washington: U.S. Government Printing Office.
GREENSPAN, A. (1993), Testimony of Alan Greenspan before the Committee on Banking, Finance, and Urban Affairs, U.S. House of Representatives, July 20, Washington: U.S. Government Printing Office.
GREENSPAN, A. (1996), "Technological Advances and Productivity", remarks at the 80th anniversary awards dinner of The Conference Board, New York, October 16.
GREENSPAN, A. (1998), "Question: Is There a New Economy?", remarks at the University
of California, Berkeley, September 4.
GREENSPAN, A. (1999), Statement and additional material in hearing before the Committee on Banking, Finance and Urban Affairs, U.S. House of Representatives, 106th Congress, February 24, Washington: U.S. Government Printing Office.
GREENSPAN, A. (2001), "Transparency in Monetary Policy", Remarks at the FRB St Louis Economic Policy Conference, October 11.
GREENSPAN, A. (2003), "Opening Remarks", in *Monetary Policy and Uncertainty:Adapting to a Changing Economy*, Federal Reserve Bank of Kansas City symposium, Jackson Hole, Wyoming, August 28-30.
GREENSPAN, A. (2004), "Risk and Uncertainty in Monetary Policy", *American Economic Review* 94 (May), pp. 33-40.
HANSEN, L. and T. Sargent (2005), *Robustness*, Unpublished Book, September 12.
HARGROVE, E. and Morley S. (1984), "The President and the Council of Economic Advisors", Boulder, Westview Press
LEVIN, A., Wieland, V.and Williams, J. (1999), "Robustness of Simple Monetary Policy Rules under Model Uncertainty", in Taylor, J., ed., (1999), *Monetary Policy Rules*, The University of Chicago Press, pp.263-99.
LE HERON, E. and CARRÉ, E. (2005), "The Monetary Policy of the ECB and the Fed: Credibility versus Confidence, a Comparative Approach", in *Financial Developments in National and International Markets*, Philip Arestis, Jesus Ferreiro and Felipe Serrano (eds), Palgrave-Macmillan, London, Chapter 5.
LE HERON, E., CARRÉ, E., (2006) 'Credibility *Versus* Confidence in Monetary Policy', *Money, Financial Instability and Stabilization Policy*, edited by L. Randall Wray and Mathew Forstater, Edward Elgar
ROGOFF, K. (1985), "The Optimal Degree of Commitment to an Intermediate Monetary Target", *The Quarterly Journal of Economics*, 100(4): 1169-90.
SVENSSON, L. (2005), "Monetary Policy with Judgment: Forecast Targeting", mimeo, February.
TAYLOR J. B. (1993), "Discretion versus Policy Rules in Practice", *Carnegie-Rochester Conference Series on Public Policy*, 39: pp 195-214.
TAYLOR, J. B. (2005), "Commentary: Understanding the Greenspan Standard", Proceedings of the Jackson Hole Symposium *The Greenspan Era: Lessons for the Future*, August 25-27, pp.107-18.
WALSH, C. (1995), "Optimal Contracts for Central Bankers", *American Economic Review*, 85(1): 150-67.
WOODFORD, M. (2003), *Interest and Prices: Foundations of a Theory of Monetary Policy*, Princeton University Press.
WRAY, R., (2004), "The Fed and the New Monetary Consensus ; The Case for Rate Hikes", *Public Policy Brief* n° 79 and 80, Levy Institute, www.levy.org