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### **1. Abstract**

This paper examines an alternative way of nominal anchoring – inflation targeting – in the case of Japanese economy. Besides the theory of inflation targeting, paper mentions other countries' experiences and questions the method of inflation targeting for the Japanese economy. Contrary to other countries' inflation targeting experiences, where inflation targeting was employed to reduce inflation and maintain it below a certain level, the feature of the recent Japanese economy, on the contrary, begs the question “Does Japanese economy need some inflation; if so what level? By pre assuming that some increasing level of inflation might activate the real economy – *ceteris paribus* - this paper investigates the role of a sound level of inflation for the Japanese economy. The paper also discusses the applicability of inflation targeting for the Turkish economy.

## **2. Introduction**

In the decades immediately following the Second World War, monetary policy was widely used to gear demand in most of the world economies. The aspect of price stability was not the primary goal and not taken into account as it will be in the 1970s. Starting with 1970s, Monetarism took centre stage and attention gradually refocused on price stability as the appropriate medium-term objective of monetary policy.

At first, this objective was generally pursued using intermediate policy targets, whether for money or the exchange rate. As Haldane suggested (1995), the idea here was that by regulating the intermediate variable, the ultimate objective - price stability - could be attained indirectly. It is only recently, during the 1990s, that the possibility of targeting inflation directly has returned to the policy forefront.

Most of the inflation targeting countries had used to implement either monetary or exchange rate anchoring prior to their inflation targeting experience<sup>1</sup>. In fact, both monetary and exchange rate targeting operationally included the framework of inflation in their methodology but biases in quantifying inflation due to statistical problems and measuring price indices led those countries alter their nominal anchoring. Then, inflation targeting started to be used conceptually as a distinct framework.

Inflation targeting started to be used by many countries including industrialized economies and small open economies. Either case, the performance of the inflation targeting has been observed to be quite satisfactory and resulted in desirable long-run outcomes. This achievement may be explained by the distinct feature of inflation targeting - transparency and accountability-. Since transparency alleviates the effects of distinct political, cultural and economical features of countries in policy implementation, inflation targeting has gained comparative advantage over other monetary policy regimes.

Regarding the recent recession, and ineffectiveness of monetary and fiscal policies in Japan, inflation targeting is proposed as an alternative for Japan. Because it is thought that the transparency feature of inflation targeting and strong commitment simultaneously may make people believe that the next period will be more inflationary than the previous if BOJ openly and officially announces inflation target. Such framework may also activate the economy by causing negative real interest rate that will result from increasing inflation expectations. Since nominal interest rate is almost zero, it seems that inflation

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<sup>1</sup> Canada, the United Kingdom and Spain used monetary aggregates as intermediate targets. The United Kingdom, Canada, including Sweden and Finland, also experienced exchange rate targeting. The level of exchange rate took a significant place in monetary programming of small-open countries such as Australia and New Zealand.

expectation is the only remedy to stimulate the real figures and this can only be done with a strong commitment such as inflation targeting.

The following section explores the theory of inflation targeting and country experiences. The fourth section questions the last two decades, by asking, whether there were any wrong policies that gradually put Japanese economy into current slam or not. The fifth section replies the question “Does Japanese economy need an inflation” by saying yes and examines ways of generating inflation in Japan. A proposal for inflation targeting framework in Japan is also added to this section. The sixth section discusses the applicability of inflation targeting for the Turkish economy. The last section concludes.

### **3. The Theory of Inflation Targeting and Country Experiences**

The rationale for use of nominal anchor relies on the idea that a nominal anchor states a constraint on the value of domestic money and enhances to monitor monetary policies and hence price stability. Moreover, nominal anchoring puts constraints on discretionary policy and relieves the time inconsistency problem arising from policy makers’ short term objectives even though the consequences of these short term policies have negative effects in the long run Kydland and Prescott (1977) and Barro and Gordon (1983).

By comparing inflation targeting to other anchor targeting models, it has seen that inflation targeting has few more advantages. Contrary to exchange rate targeting, inflation targeting does not restrict the monetary independence and enables monetary policy to focus on domestic considerations. Central banks pursuing inflation targeting can easily respond to shocks by using all their monetary tools available. Under inflation targeting,

moreover, velocity shocks are more easily eliminated since the central banks do not have to stick to or follow up a certain money-inflation relationship. Nevertheless velocity stability is the must condition to have an appropriate monetary targeting<sup>2</sup>. Inflation targeting also enables monetary policy to focus on domestic considerations as does monetary targeting but it provides more flexibility and discretion due to the implicit resistance to velocity shocks. It's high level of accountability, on the other hand, constrains discretion and destroys the time-inconsistency problem in the conduct of monetary policy. Another advantage with inflation targeting similar to exchange rate targeting is its transparency that public can easily monitor and be aware of the current situation and foresee the future more effectively.

Inflation targeting, however, is not without it's problems. In contrast to exchange rates and monetary aggregates, inflation might not easily be controlled by the monetary authorities. This suggests that hard targets from inflation might be worth phasing in only after there has been some successful disinflation. Chile for example waited for implementing hard inflation targets and interpreted its initial targets as inflation targets until market renamed them as hard targets due to success of disinflation program<sup>3</sup>. Inflation targeting was not also implemented in industrialized countries until substantial disinflation has been achieved.

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<sup>2</sup> Monetary targeting and inflation targeting have many features in common; a strong commitment to price stability; the specification of numerical inflation goals; transparency of policy and effective communication with the public; a forward-looking approach that takes into account the lags inherent in monetary policy; and flexibility to respond to short-run economic developments (See Mishkin 1997).

<sup>3</sup> See Morande and Schmit-Hebbel, (1997).

Inflation targeting also confronts the problem of uncertainty in forecasting of inflation. In order to diminish the cost of “credibility”<sup>4</sup>, many countries implementing inflation targeting performs inflation forecast to foresee the future better. However, due to the variability in inflation rate and sensitivity of it to any kind of shocks, these forecasts on the one hand might not be very accurate. On the other hand, running such forecasts, like all countries do, is the most appropriate way to reveal the implicit lag problem of monetary policy and hence inflation targeting. As Bowen suggests “The most appropriate guide to monetary policy is the best obtainable forecast of the probability distribution of inflation, over a time horizon defined by how long it takes for a change in monetary policy to affect inflation.”

### **3.1.The Meaning of Inflation Targeting**

Inflation Targeting in literature is defined as the framework for monetary policy characterized by the public announcement of official quantitative targets (or target ranges) for the inflation rate over one or more time horizons, and by explicit acknowledgments that low, stable inflation is monetary policy’s primary long run goal. Inflation targeting is not a method to decrease ongoing inflation but an anchor to monitor and control price stability in an economy after a thorough disinflation period. Other important features of inflation targeting are vigorous efforts to communicate with the public about the plans and objectives of the monetary authorities, and, in many cases, mechanisms that strengthen the central bank’s accountability for attaining those objectives.

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<sup>4</sup> Inflation-target countries monitor a myriad set of indicators when forming their forward-looking inflation assessment This typically means that all useful information is employed in the setting of monetary policy.

The United Kingdom, New Zealand, Canada, Sweden and some other small open economies have implemented inflation targeting framework recently. Although those countries have implemented inflation targeting under distinct circumstances and country specific conditions, they have commonly achieved lower inflation rates, and lower inflation expectations. As the book from Mishkin and Bernanke (1999) stated, these countries have experienced less pass through into the inflation rate of shocks to the price level and they have typically enjoyed lower nominal interest rates as a result of the lower inflation expectations. Experience also indicates that inflation targeting enhances the transparency of monetary policy and betters off public understanding. It also improves the policy maker accountability and establishes sound nominal anchoring for monetary policy.

Although inflation targeting was implemented in various ways by different countries, it reflects following common features in each experience; First, inflation targeting pre assumes medium term numerical targets and these targets are publicly announced. Second, it declares a commitment to price stability as the primary, long run goal of monetary policy and to achievement of the inflation goal (Mishkin 1999). Third, it provides full transparency in the implementation of monetary policy that helps financial institutions in the market to foresee the future and behave accordingly. The issue of transparency also has an influence to diminish the level of moral hazard and weaken the asymmetric information that both are significantly able to destroy the fundamentals of free market mechanism. Enhancement of disclosure on the other hand might be considered one of the consequences of inflation targeting. Fourth, inflation targeting

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An accurate forecast might cause to the least cost in terms of credibility that is to be observed and measured

betters off the monitoring abilities of central banks and increases the accountability in measuring inflation rates.

### **3.2. Preconditions for Inflation Targeting**

In theory, inflation targeting is quite straightforward method. Central banks forecast the future level of inflation and compare it with the target inflation rate (the inflation rate the government believes appropriate for the economic activity); the difference between the forecast and the target determines how much monetary policy has to be adjusted.

A performance of inflation targeting depends on two prerequisites. Countries who would like to perform inflation targeting effectively should first have independent central banks and secondly should have only one indicator to target.

The issue of central bank independence within the context of inflation targeting is evaluated by distinct ways in the literature. Some economists, such as Debelle and Fischer (1994), suggest that independence of the central bank need not be associated with the freedom for it to choose its own goals. Plus it may be more appropriate for the central bank to be goal dependent<sup>5</sup> but have instrument independence, that is be unconstrained in the operation of monetary policy in pursuing the assigned goal. In practice, however, countries such as Australia Finland and Sweden have announced their inflation targets through their central banks while Canada's and New Zealand's targets have been the result of joint agreements between the Minister of Finance and the Governor of the

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by economic agents- private companies.

<sup>5</sup> Central Bank's goal might be assigned by the government or announced as unanimous decision of economic authorities in the economy.



central bank. Nevertheless it is a common expectation that the inflation target which has been announced by the central bank may be endorsed by the government later on (in 1996 Australia experienced that situation). Therefore it could be beneficial if policy making institutions in any particular country implementing inflation targeting can attain an agreement about the level and the announcement of the target<sup>6</sup>.

This issue brings couple of more questions into mind How much central bank can be independent or reluctant to the government influence? What the good coordination between monetary and fiscal authorities in the context of inflation targeting is? No central bank can be completely independent from government or other policy making institutions' influence in neither determining the target nor announcing it. However the central bank has to be completely free in choosing the instruments to achieve inflation target that other decision takers approve. In order to do that and as an answer to the second questions, the good coordination between the central banks and fiscal authorities should be isolated from fiscal dominance<sup>7</sup>. If fiscal dominance exists, central banks will be obliged to deal with the inflationary pressure that are to be caused by fiscal policies. This destroys the effectiveness of inflation targeting and worsens the policy or instrument independence of central banks. Obviously, under the condition of fiscal dominance, central banks will be under the pressure of discretionary policies of governments. The task of the monetary policy and hence inflation targeting will deviate from the objective

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<sup>6</sup> A unilateral announcement of the target by the central bank may decrease the effectiveness and dilute the credibility of the framework. See Debelle (1997).

<sup>7</sup> Fiscal dominance is the dictation of fiscal policy on monetary policy. As Debelle, Masson, Savastano, and Sharma (1998) explained; "Freedom from fiscal dominance implies that government borrowing from the central bank is low or nil, and that domestic financial markets have enough depth to absorb placements of

of stabilizing prices and reaching the inflation target to the objective of accommodating fiscal demands of governments. Therefore, the implicit relation between monetary and fiscal policy should carefully be balanced under inflation targeting. In order to reach and maintain the inflation target, monetary policy needs good assistance from fiscal policy. An explanatory fiscal policy or high debt ratio-high interest rate vicious cycle may prevent central banks to reach their inflation target via increasing expectations and hence vulnerability in financial markets in the short run.

However, apart from typical employment-inflation vicious cycle, inflation targeting regimes do not ignore traditional stabilization goals. Experience indicates that monetary authorities of inflation targeting countries also consider fluctuations in output and employment, and pre assume some place for unexpected short term shock in their targeting process. All inflation targeting countries have been trying to minimize the output declines by taking a gradualist approach to disinflation. Mishkin (1997, 1999), in fact, says that “inflation targets can increase the flexibility of the central bank to respond to declines in aggregate spending because declines in aggregate demand that causes the inflation rate to fall below the floor of the target range will automatically stimulate the central bank to loosen the monetary policy without fearing that its action will trigger a rise in inflation expectations.”

The experience reflects stimulating effects of inflation targeting as well. All countries experienced inflation targeting so far has set their inflation rate, as a midpoint target, significantly above the zero. Obviously the rationale behind this common decision was that too low inflation might cause a contraction in real economy and make the period

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public debt, such as treasury bills. It also implies that the government has a broad revenue base and does not

of recession longer. The longer deflationary period causes the weaker financial system and weakens the confidence of economic agents including household. The Japanese case for instance recently reflects the adverse effects of prolonging deflation on real and financial sectors. As DeBelle 1999 suggested inflation targeting in principle helps redress this asymmetry<sup>8</sup> by making inflation-rather than employment, output or some other criterion- the primary goal of monetary policy.

The second prerequisite for inflation targeting is to have a sole target within the system. Inflation targeting, otherwise, will contradict with other targets or with any other nominal anchor. Therefore monetary authority should only target the inflation but not any other economic indicator such as wages, level of employment or exchange rate within the context of inflation targeting. A country with fixed exchange rate system for instance will not be able to reach its inflation target and exchange rate target simultaneously. Because the exchange rate target subordinates the monetary policy to be implemented and causes the deviation from targeted inflation rate. Having more than one target on the other hand destroys the credibility of both anchoring and worsens the adverse expectations. However other economic goals can be achieved to the extent that it is consistent with the inflation target. Under pegged exchange rate, for example, a range for exchange rate may be consistent with the inflation targets and policies to attain this target. Generally, inflation and exchange rate targets do not coincide with each other. The famous trade-off between employment and inflation however may not occur in the long run under the scheme of

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have to rely systematically and significantly on revenues from seigniorage.”

<sup>8</sup> Some economists believe that an attempt to achieve several goals gives monetary policy an inflationary bias. Central banks certainly appear to get more public criticism for raising interest rates (a customary anti-inflationary tactic) than for lowering them, and they are subject to constant pressure to stimulate the economic activity.

inflation targeting. As it has been widely discussed in the literature already that the achievement of inflation target and consequently stability in the market might be the optimal condition to reach the full employment objective. In the short run the trade off between two indicators may persist. The reaction of monetary authority to demand or supply shock may contradict with inflation targeting policy.

The other goal of central banks that might contradict with inflation targeting is the financial stability. Countries who plan to pursue inflation targeting are likely to be more successful if they have strong banking and financial system. Tools of monetary policy to reach an inflation target may weaken the positions of banks or banks may cause the undershooting of the inflation target. Tightness of monetary policy or deflationary pressures originated from banking sector in crisis in particular may cause some deviations from inflation target.

### **3.3. Implementation of Inflation targeting**

These two pre requisites listed above make the monetary authority able to conduct sound monetary policies to reach the target. However the authorities need to fulfill some other preconditions to adopt the target.

Credibility is the issue that monetary authority should take into account carefully. In terms of inflation targeting, credibility of the monetary authority can be measured through the steps that it takes in implementing the inflation targeting program. First the monetary authority must establish explicit quantitative target or band of a target for inflation and announce this target to the public in the most obvious and unambiguous way. Public should know that the privilege of the monetary authority is to stick to the

announced target and it takes precedence of all other objectives. The determination of a target highlights another question How monetary authority identifies the target?

### **3.3.1. Definition of the Target**

Although the definition of the target differs from country to country, there are certain steps that should be followed in order to specify the target. Determining the time horizon and choosing the price index upon which the inflation target will depend are the primary stages in specification of the inflation target. Setting the target in terms of either the price level, or giving the target a numerical value, deciding whether to define the target as a point or a band, and determining possible escape clauses or exemptions to the inflation target under specific circumstances are following stages<sup>9</sup>.

#### *a) Time Horizon*

The definition of inflation target varies among countries with respect to its time horizon. Time horizon can be described as the longevity of time period to reach the pre announced target and the time period that the target predominates. The time horizon of inflation target is directly related to the initial level of inflation rate when the inflation targeting has been adopted. Countries who targeted future inflation rate different from the current rate set an implementation period<sup>10</sup> including lag periods of monetary policies to

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<sup>9</sup> See Debelle, Masson, Savastano, and Sharma (1998)

<sup>10</sup> This period is approximately around 18 months or two years. Targets for further step reductions in the inflation rate were set at 12 month intervals in New Zealand, and 18 month intervals in Canada. In Sweden and Finland, this period was around two years while it was set as the end of parliamentary term in England.

reach the preferred or targeted rate. This period also indicates the ability of monetary policy to deal with short term shocks.

#### *b) Level of Target*

The level of the target carries another important aspect of inflation targeting. In theory zero inflation is equal to price stability. However DeBelle 1998 suggested, in practice the concept of price stability is affected by issues such as the measurement and nominal rigidities<sup>11</sup>.

Although the ultimate aim for monetary authorities is to set the price stability, all monetary authorities of inflation targeting countries have set their midpoints of inflation targets above the zero<sup>12</sup>.

The reason that all inflation targeters have chosen their inflation targets above zero not only depends on the measurement problems of price index but also depends on some precautionary behavior that the inflation target equal to zero or to low levels may cause some negative effects on real economic figures. As Tobin (1972) analyzed the downward rigidity of prices and wages may require some certain level of inflation to provide relative price adjustment. Setting the target to zero on the other hand may exclude

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<sup>11</sup> The biases in the calculation of the consumer price index imply that price stability is likely to be associated with a small positive rate of inflation in the CPI rather than a zero rate. These biases includes those due to the introduction of new goods, outlet substitution bias, quality bias and those caused by the adjustment of consumers to relative price changes between the periodic re-definitions of the basic consumption bundle (see DeBelle1997).

<sup>12</sup> Midpoints for inflation targets of inflation targeting countries as follows; New Zealand 1.5%, Canada and Sweden 2%, the United Kingdom, Australia and Spain 2.5%, Israel 8.5%.

the possibility of negative real interest rate which may be necessary to activate the economy that is at the bottom of a recession<sup>13</sup>.

As stated already, having a target equal to zero or the one too low may lead to deflation in the economy. The evidence on affect of deflation from literature (Mishkin 1991, 1997) and Akerlof, Dickens and Perry (1996) suggest that deflation may cause severe economic contraction and destroy the financial system. Targeting inflation rates above zero, however, makes periods of deflation less likely. Plus targeting inflation rates above zero does not lead to either increasing inflationary expectations or declining central bank credibility<sup>14</sup>.

### *c) Choice of Price Index*

The base to calculate the level for an inflation target may differ from country to country. In practice, however, a number of countries use an underlying measure of inflation rate that is based on the CPI. The reason that underlying inflation is preferable to headline CPI inflation rate relies on one particular feature of the former one. Underlying inflation rate excludes non-monetary determinants of inflation<sup>15</sup>.

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<sup>13</sup> Since nominal interest rates are bounded below by zero, a zero inflation target implies that the potential for negative real interest rate is ruled out (See Summers 1991). However, with stable and low inflation, downward rigidity in prices and wages may decrease and so may the necessity of negative interest rate to activate the economy (See Debelle 1997).

<sup>14</sup> See Almeida and Goodhart (1998) and Bernanke, Laubach, Posen, Mishkin (1999).

<sup>15</sup> The principal difference between the CPI and the underlying inflation rate in a number of countries is that the underlying rate excludes mortgage interest payments (see Debelle 1997). This avoids the problem that if the central bank responds to a rise in the (expected) inflation rate above the target level by increasing short-term interest rates, the CPI inflation rate will rise further as the increased cost of funds flows through to higher mortgage lending rates. The component of the CPI which is affected by changes in mortgage costs is easy to identify and it is published. Items excluded from CPI vary across countries. Canada and Finland both exclude indirect taxes so that changes in fiscal policy do not prompt undesired changes in monetary policy. Australian and Canadian underlying rates also exclude food and energy prices which tend to be highly volatile but are generally net out in the long run. New Zealand's underlying inflation rate is calculated by applying a number of caveats specified in the Policy Targets Agreement. The caveats specify

Underlying inflation rate has been criticized that it may be misleading if all price and wage decisions are taken based on regular CPI (published) rate. Another criticism is that the underlying inflation rate may not be as transparent as the regular inflation rate. Canada and New Zealand alleviate these problems by assigning the underlying inflation rate as intermediate target toward the final goal of price stability.

*d) Point or Band targeting*

The next step in defining the inflation target is to decide whether the target will be a numerical number or a band. Finland and Australia has focused on a particular point target for the inflation rate while Canada, the United Kingdom, Sweden and New Zealand preferred the band. The rationale for constructing inflation band is directly related to the possibility of imperfect control of monetary policy over the inflation rate. As stated already, variable lags of monetary policy and short term shocks harden to set an inflation rate at a certain level. Second issue related to inflation band is that how large the band will be? Obviously narrower band indicates higher commitment to the announced target even though it is more risky as if compared to wider band. Because it is easier to deviate and go out of band with tighter band in the short term whereas observing the performance of central banks is much easier with tighter band. On the other hand, with a tighter band, central banks are not as flexible as they would be with wider band under the circumstance of short- term shock.

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the types of (supply) shocks that are allowed to be accommodated by the Central Bank of New Zealand. These shocks are changes in mortgage interest rates, price changes caused by natural disasters, changes in indirect taxes and other government-set prices, and the direct impact of significant changes in import or export prices, where "significant" is defined as any shock which has a cumulative impact on the price level of more than .25 of a percentage point over a 12 month period See Debelle (1997).



The importance of determining the right size of band is directly related to the maneuvering ability of monetary authority. Adopting a narrow band may induce instability in the instrument of monetary policy. As Debelle (1997) argues that to achieve a given movement in the inflation rate, the shorter the time horizon, the larger the change in the instrument of monetary policy. The amount of change in interest rate may be higher within the narrow band compared to the one within the wider one. Often fluctuations in interest rates may cause instability in financial market. The same occurs if monetary authority uses the exchange rate to reach the inflation target. Exchange rate, as an instrument, may help monetary authority to meet the target more easily in the short-term. However permanent use of exchange rate to attain the inflation target may contradict with the use of interest rates in the medium term<sup>16</sup>. If the band is wider, monetary authority can have more space to use monetary instruments in more flexible way. However, the wider band causes the economic actors to consider the upper band an inflation expectation, thereby imbuing inflation expectations with an inflation bias. This might explain preference of narrow ranges by some countries despite to comparative advantage of wider ones.

Overall, many of these issues revolve around a credibility-flexibility trade off; a wider range is flexibility-enhancing, but credibility-depleting.

### **3.3.2. Accountability**

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<sup>16</sup> The change in interest rates necessary to induce the appropriate movement in the exchange rate in the short term, may cause an undesired movement in domestic demand and inflation in the medium term. A further problem is that there may be an undesirable distributional impact on the traded and non-traded goods sector if too much reliance is placed on the exchange rate, particularly if the source of the inflation is

Inflation targeting has another distinguished feature that is its accountability. The easy accountability of inflation targeting enables monetary authority to monitor and enhance the understanding of expectations.

Inflation targeting also increases the accountability of central banks and hence reduces the possibility of time inconsistency trap causes the monetary authority to deviate from its long term objective. As far as credibility issue concerned, inflation targeting also provides a confidence among the agents of the economy<sup>17</sup>.

The feature of accountability provides good benchmark or anchor that can easily be observed by all agents of an economy. Market can judge the actions of monetary authority and monetary authority also checks itself. If any deviation from the point target or from the target band occurs, the monetary authority is supposed to make detailed explanation including reasons and prospective reactions.

However the existence of lag in the implementation of monetary policy makes the period longer in which the effects of a change in monetary policy will be observed. The effect of any policy action will not be ascertained for at least one year and possibly longer<sup>18</sup>. The responsibility of monetary authority to public indicates close relationship between accountability and transparency by the way. As a rule of thumb, the more

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in the non-traded sector. The appreciation in the exchange rate, while reducing the inflation rate of imported goods will reduce the competitiveness of the export and import-competing sectors.

<sup>17</sup> Regarding the credibility issue and time inconsistency problem, I believe the best explanation would be the following quote from Mishkin 1999. "Since time-inconsistency is more likely to come from political pressures on the central bank to engage in overly expansionary monetary policy, a key advantage of inflation targeting is that it can help focus the political debate on what a central bank can do in the long-run – that is, control inflation – rather than what it cannot do – raise economic growth and the number of jobs permanently through expansionary monetary policy. Thus inflation targeting has the potential to reduce political pressures on the central bank to pursue inflationary monetary policy and thereby reduce the likelihood of time-inconsistent policymaking."

<sup>18</sup> To alleviate this problem, inflation forecast can be used as yardstick. See Debelle (1997) and Svensson (1996)

transparency is the higher effectiveness of monetary policy in the inflation target framework. Problems caused by the lag problem can be relieved much easier by being as transparent as possible.

Transparency allows private sector agents to monitor and – if necessary – questions the authorities’ advice, analysis and actions. And this, in turn, increases the incentives on the authorities to get their analysis right. Because private sector agents will quickly detect any myopic policy strategy under a transparent monetary framework, the scope for surprising the public – by inflating and gaining the transient output rewards (Haldane, 1995) – is severely constrained.

### **3.3.3 Forecasts**

One of the distinct features of inflation targeting is that it dynamically uses forecasts. As already stated before, the difference between the current level of an inflation and the forecast of an inflation shows the way monetary authority to reach the target. As Debelle, Masson, Savastano and Sharma (1998) suggested an inflation target must be forward-looking. Preemptive strikes are necessary. Action must be taken before the inflation rate begins to rise. Consequently, the central bank’s forecasts of inflation are critical. Svensson (1996) goes further and argues that the official inflation forecast effectively functions as an intermediate target. If the inflation forecast over the appropriate horizon (given by the average lag of monetary policy) differs from the target, then the monetary authority should respond by altering the stance of monetary policy. He argues that the inflation forecast is well suited for this role as an intermediate target

because it is, by definition, correlated with inflation at the forecast date, controllable, easy to observe and transparent.

Inflation forecasts can be likened to any other intermediate variable. They are constructed in such a way as to have a predictable relationship with the final objective; they are controllable, in the sense that the authorities' monetary instrument affects projected inflation outturns; and they are clearly a lead indicator of future inflation, since they are explicitly forward-looking. So, inflation forecast possesses all the rights being an efficient intermediate variable to monitor the inflation targeting framework.

### **3.2. Country Experiences**

All features mentioned so far are observed in the practical framework of inflation targeting countries. As a leader, New Zealand prepared the skeleton of practical implementation and the followers have constructed their own structure in accordance with this skeleton. Although key features of inflation targeting among experiencing countries are identical in principle, some minor country-specific changes have also been observed in practice. Following episode of the paper is going to mention about the experience of each country with respect to the general characteristic of inflation targeting mentioned so far.

#### *3.2.1. The announcement of a target;*

New Zealand, as a Pioneer, announced its inflation target based on the new legislation that described the responsibility of Reserve Bank of New Zealand in inflation

targeting and in general<sup>19</sup> and the prospective schedule of Policy Target Agreement which will be held between the government and the central bank. The inflation target is announced in policy target agreement between the Ministry of Finance and the Governor of the Central Bank.

Second country adopted inflation targeting one year after New Zealand was Canada. In Canada, the transition period to the new methodology was much softer than that of New Zealand, Canada did not announce or run any legislation to commence the inflation targeting period. The practice of inflation targeting gradually started in Canada. Similarly, however, Canada announces its inflation target as a result of mutual agreement between the Government and the Bank of Canada. The Bank of Canada is the responsible institution in Canada for employing monetary policy to maintain low inflation and price stability in accordance with the inflation target. However there is no sanctions if a departure from the target occurs.

Inflation targeting in the United Kingdom served as a tool to restore the credibility of monetary authority that failed during the foreign exchange crisis in 1992. Therefore the United Kingdom differs from New Zealand and Canada as far as the initial reason for new era –inflation targeting or alternative anchor- concerned.

The institutional arrangements in the United Kingdom were also significantly different from those in Canada, which had important effects on the operation of the new

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<sup>19</sup> The legislation requires the Reserve Bank of New Zealand “formulate and implement monetary policy directed to the economic objective of achieving and maintaining stability in the general level of prices”. Although inflation targeting was the means of chosen to achieve price stability, the Act itself does not go beyond stating the need for quantitative performance criteria. See Bernanke, Laubach, Mishkin and Posen (pg. 88 1999)

policy regime. Unlike the relatively independent Bank of Canada, the bank of England did not have unilateral authority to manipulate the instruments of monetary policy. To a significant extent, the bank exerted its influence over policy through its analyses and its public exhortations; in doing so, it functioned as the government's "counter inflationary conscience." The system of divided responsibility, in which the Chancellor of the Exchequer controlled the instruments of policy but the Bank of England had primary responsibility for assessing the outlook for inflation, had a substantial influence on the effectiveness of monetary policy in Britain (See Bernanke, Laubach, Mishkin and Posen 1999, pg. 145).

Swedish experience has an unique characteristic among other countries' experiences. Although the Riksbank was the sole institution to declare and convey the inflation-target, the price stability was not the only task for it. On the contrary Swedish monetary authority aimed to allow monetary policy to be directed toward domestic objectives including short-run output stabilization. Plus it simultaneously aimed to relieve the expectation that unsustainable fiscal deficits would be monetized. The rationale behind this was to rise the credibility of monetary policy in the long run. Therefore the Riksbank intentionally delayed its announcement on specific inflation target and first aimed to get rid of domestic fragility and recession through more flexible monetary policies.

When the decision was taken for inflation targeting, Swedish economy was struggling with the consequences of collapse of her former pegged exchange rate system. The Swedish economy was in big recession. Real GDP had fallen by 4%, unemployment had reached 7% and was continuing to rise toward unprecedented levels, and the central

government budget deficit had grown to more than 11% of GDP. Inflation, which had been falling steadily since early 1990, however was down to a historically low rate of 3% per year. While the 14% depreciation of the Krona over the last few months of 1992 would inevitably have some inflationary impact, the recession was sufficiently deep that a reversal of the downward trend of inflation seemed unlikely (See Bernanke, Laubach, Mishkin and Posen 1999, pg. 145). Under this circumstance, it was not seemed very hard to achieve the target. However the Riksbank went for significant interest rate cut and also forced by politicians to implement more aggressive monetary policy. Declaration of inflation targeting without any pre-announced target by the Riksbank not only enabled her to take actions to activate the economy through those instruments mentioned above but also prevented the rise of expectations in the long run.<sup>20</sup>

*3.2.2. Does really the inflation only indicator that monetary authorities of inflation targeting countries care about?*

Although the inflation is to be the only indicator that monetary authority takes into account under inflation targeting, it has been observed that monetary authorities care about output and employment as well. In other words, all inflation targeting countries leave some space for more flexible monetary policy to stabilize other macroeconomic goals besides to inflation.

In New Zealand, for instance, which was known the rigorous advocate of inflation-targeting, some level of flexibility in monetary policy has been allowed to stabilize the fluctuations in real GDP and employment. Similarly, in Canada, the inflation

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<sup>20</sup> The Riksbank provided an escape clause by saying that the target would not have to be met until more

target has been viewed as a way to help dampen cyclical fluctuations in economic activity. The United Kingdom and Sweden have been relatively flexible in the implementation of inflation targeting. Both countries seemed more discretionary in terms of monetary policies in short run compared to those of New Zealand and Canada.

### *3.2.3 Definition of Target*

Although definition of target shows different characteristics across countries, each country, more or less, specified following prerequisites;

#### *a) Time horizon*

The time horizon of inflation target is directly related to the initial level of inflation rate when the inflation targeting has been adopted. Countries where the initial inflation rate differed from that of the desired inflation target, allowed an implementation period for around two years. New Zealand, Canada and United Kingdom had very satisfactory disinflation period before they set their targets for longer periods. Although those countries had not only used their initial targets as anchors but they also had observed lag periods of monetary instruments and effectiveness of monetary tools being used as well. In New Zealand and Canada for instance the timetable of the disinflations were pre specified. Around 18 months was allowed for the achievement of the initial target to take account of lags in the operation of monetary policy. Thereafter, targets for further step reductions in the inflation rate were set 12 month intervals in New Zealand, and 18 month intervals in Canada (see Debelle 1997).

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normal economic conditions prevailed.



Similar experiences were observed in the United Kingdom and Sweden as well. Both countries had periods around two years to observe. But the reason for waiting in the United Kingdom was to disinflate the economy while the reason for Sweden was to stabilize the other instabilities first such as output and employment level.

*b) Which price index*

The selection of price index in inflation targeting commonly depends on two criteria. First, different characteristics of CPI baskets in each country and second the aim of isolating inflation targeting regime from short term supply shocks as much as possible. However the former criterion is more significant to determine the price index which targeting will be based on. Therefore New Zealand and the United Kingdom preferred to use a price indexes in which some commodity prices were excluded. The rationale for this is to eliminate first round effect of supply shocks from inflation targeting. Canada and Sweden on the other hand chose to base inflation targeting on headline CPI. For Canadian Case, it was because of the trustworthiness of CPI calculation and the quality of headline CPI. While the reason for Sweden solely depended upon wage-setting arrangements of that country where headline CPI is a reference price that has superiority to others in internal price settings. However both Canada and Sweden have used core rates in their inflation targeting as well.

In literature, however, the principal difference between the CPI and the underlying inflation rate is defined as follows; the underlying rate excludes mortgage interest payments (see Debelle 1997, Bernanke, Laubach, Mishkin and Posen 1999). This avoids the problem that if the central bank responds to a rise in the (expected) inflation rate

above the target level by increasing short-term interest rates, the CPI inflation rate will rise further as the increased cost of funds flows through to higher mortgage lending rates

In practice, items excluded from CPI vary across countries. Canada and Finland both exclude indirect taxes so that changes in fiscal policy do not prompt undesired changes in monetary policy. Australian and Canadian underlying rates also exclude food and energy prices which tend to be highly volatile but are generally net out in the long run. New Zealand's underlying inflation rate is calculated by applying a number of caveats specified in the Policy Targets Agreement. The caveats specify the types of (supply) shocks that are allowed to be accommodated by the Central Bank of New Zealand. These shocks are changes in mortgage interest rates, price changes caused by natural disasters, changes in indirect taxes and other government-set prices, and the direct impact of significant changes in import or export prices, where "significant" is defined as any shock which has a cumulative impact on the price level of more than .25 of a percentage point over a 12 month period.

The inflation target in the United Kingdom is defined in terms of the annual change in the retail price index excluding mortgage interest payments, or RPIX. Attention is also paid to the price index RPIY, which is RPIX less the first round effects of indirect taxes. Both RPIX and RPIY include food and energy prices, so that the target index has in practice been a compromise between headline inflation and a measure of underlying inflation (See Bernanke, Laubach, Mishkin and Posen 1999 pg.146).

*c) A point or band targeting*

As stated above, the rationale behind to construct the inflation band is directly related to the possibility of imperfect control of monetary policy over the inflation rate. As stated already, variable lags of monetary policy and short term shocks harden to set an inflation rate at a certain level. Second issue related to inflation band is How large the band will be? Obviously narrower band indicates higher commitment to the announced target even though it is more risky as if compared to wider band. The importance of determining the right size of band is directly related to the maneuvering ability of monetary authority. All these four countries that I am concentrating on have chosen the band rather than a point. United Kingdom, however, returned to point targeting in May with threshold values under which the government is obliged to make a detailed announcement if the deviations form thresholds occurs. In Sweden, the band is much narrower, 2% in width comparing to those of New Zealand and Canada where the mid points of band are around 2%. Sweden also approved the idea of putting floor to the band to control deflationary movement as Canada had commenced doing it earlier. Escape clauses that mentioned before can be considered criteria to determine the wideness of the band.

#### *3.3.4. Accountability*

Accountability and hence transparency and credibility as a consequence are regarded substantially by all inflation targeting countries. Especially for New Zealand, the issue of accountability carries great importance where the governor of Reserve Bank can loose his job if the performance of inflation targeting is not satisfactory. United Kingdom and Sweden publish inflation report to maintain the transparency to public. In Canada the

transparency issue has taken significant place in each step of inflation targeting. Canadian approach is a strong commitment to transparency and to the communication of monetary policy strategy to the public.

### *3.3.5. Forecasts*

In order to predict future better and enhance foreseeing beyond the lags of monetary policy, an implementation of sound inflation forecasts in inflation targeting framework is recommended and used by monetary authorities of New Zealand and the United Kingdom. These two countries also publish their inflation forecast. Canada uses instead the so called monetary condition index-composed of weighted average of the exchange rate and the short term interest rate- in implementation of inflation targeting. New Zealand adopts particular assumptions in forecasting inflation. The exchange rate is assumed to move to maintain purchasing power parity with its trading partners. The interest rate is assumed to remain unchanged in nominal terms. In the United Kingdom, inflation forecasts are based on different scenarios.

## **4. Developments in Japanese Economy**

The recent situation of the second biggest economy of the world creates a significant challenge for economics. It is pretty hard to explain why the largest creditor of the world came to this point and stuck with liquidity trap. It is quite astonishing but Japanese economy is in Liquidity Trap. Because people in Japan do not hold sufficient amount of demand to spend, firms do not invest anymore, actors of the miracle economic performance during 1970 and 80s are reluctant to do anything. Why? Maybe they are

scared about their future. Maybe they just prefer to hoard their money under their pillow.

Still Why?

#### **4.1. Historical Background, 1970-1993**

In order to answer this question, travelling back to 1970s and investigating for any inherited weaknesses of fiscal, monetary policies and/or for structural weaknesses might be quite informative. Perhaps the reasons for current sluggishness of Japan Economy have lied somewhere in the past.

After World War II Japanese economy had gone through immense reconstruction period until mid 1950s. Starting with 1955, high growth period took place and Japanese economy grew around 10% each year from 1956 to 1970. After this high growth period which almost continued for two decades. Japanese economy entered into the period of stable growth. Despite two oil shocks, in this period, Japanese economy attained stable growth rate with the range of 3-5% until late 1980s. And the bad news -the Bubble-not only constructed the basement for low growth but also affected some particular traditional characteristics of the Japanese economy. Emergence of Bubble in the economy lasted until early 1990s and low growth period started after the collapse of the Bubble. Starting with 1992, Japanese economy has confronted long-lasting stagflation.

General overview of Japanese economy for the last two decades highlights three possible factors that might have led the current situation in the economy; the fiscal burden, the change in financial structure and the Bubble economy.

In early 1970s, Japan was hit by two major shocks; the declaration of US that converting to floating exchange rate (known as Nixon shock), and the first oil crisis. New exchange rate system led to appreciation in the value of Yen against Dollar. Then, the first oil crisis hit already stalling economy. To increase domestic borrowing to cover up the gap between tax revenues and expenditures was inevitable. Yet this not only caused large amount of deficit but also caused fundamental changes in financial climate.

Increasing amount of deficit of public sector started to crowd out the corporate sector shocks in early 1970s. By 1975 the public sector became the largest sector in the financial sector and replaced the corporate sector. Until mid 80s Japan's public sector was the largest deficit producer. The traditional route of the flow of funds was changed; most of the money collected through postal service and pension system that had used to go private corporations commenced to flow to public sector.

Government issued bonds to cover public deficits. The perpetuation of issuing bonds and their increasing amount in the financial sector also changed the formation of stocks run in the market. Government bonds began to take bigger proportions in security market. Market also literally became indebted to use of government bonds in financial transactions.

High saving ratio maintained and increasing fiscal burden forced people to invest more precautionary alternatives. In this period personal and households assets increased tremendously. Generally, rising deficit and hence public borrowing ratio has kept crowding out the economy and caused more precautionary motives among households in time. There are five detrimental effects of high public borrowing and increasing public

bond issuing; First, public borrowing crowds out the investment of private sector through causing rises in interest rate. Therefore governments try to accommodate economy through arising money supply to offset the contradictory effects of rising interest rates due to crowding out. This creates (fiscal) inflation<sup>21</sup> that is the second detrimental effect of increasing public borrowing. However, crowding out effect will not occur if the economy has been in recession already and there will be no need to supply more money to economy to stabilize the level of interest rate that had already negative trend. The more money supply in the case of recession will only lead to lower nominal interest rate and will put the economy into Liquidity trap. This situation fits to the situation that Japanese economy faces recently. The third detrimental effect of public borrowing is “Fiscal ossification” that causes increasing portion of interest payments in budget deficit and hence rising debt service. In the case of extreme Fiscal ossification, government becomes very rigid to perform its traditional functions and borrowing functions as a way of repaying previous debts. Irresponsibility is the fourth detrimental effect that in theory causes loss of fiscal discipline. Since tax revenues are needed to pay the principal and interest on the debt, bonds are really a forward contract on future tax payments. Last, the public borrowing increases the debt of future generations<sup>22</sup>.

In order to answer the question that have been asked in the beginning of this section - whether any policy mistake might have caused or prepared the basement for the

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<sup>21</sup> Whether or not bonds breed inflation depends on whether or not excess currency is issued to aid their absorption. As long as bonds are observed by the markets and the central bank does not loose its monetary discipline, bonds issues themselves will not create inflation.

<sup>22</sup> This is an ongoing debate among academics; If domestic bonds are issued, they result in no net increase or decline in domestic resources. Even if later generations are taxed to make the payments, the same generation that pays the debt disadvantaged. Classical view on the other hand expresses that bond issues carry with them other burdens for later generation. Public bond issues for instance will drive interest rates

current recession in Japanese economy- those detrimental effects of fiscal borrowing mentioned above can be questioned for the case of Japan. When one looks at the economic figures for the last two decades, it is quite obvious that there was a correlation between increasing public expenditures, monetary base and inflation rates. However we do not have enough clue that whether BOJ used excess currency to aid their absorption by the market or just monetized to stabilize the economy<sup>23</sup>. Yet there was one certain thing in early 1980 that Japanese finance had a hard time to absorb increasing amount of government bonds within the market. That was, in fact one of the main reasons for liberalizing interest rates. The result was that the markets were free to set prices for government bonds and the interest rates became liberalized This liberalization in interest rates lured too many investors to invest in the highest asset available. Banks were forced to increase their ceilings in interest rates. The result was a big change for Japanese economy that used to have de facto restrictions on the transactions of government bonds. Deregulation and disintermediation period started and forced market further structural changes.

The issue of massive government debt spurred the development of the secondary market for bonds-new market to trade bond and stock futures and to launch new securities

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higher than they otherwise would be. If this dampens private investment, then future generations will inherit less capital than they would have had the bonds not been issued.

<sup>23</sup> Article 5 mandates that debt financing be done through the markets: “No bond issues may be underwritten by the Bank of Japan, nor may any borrowings be made from the Bank of Japan except in special cases and within limits determined by vote of the diet.”

However, the prohibition against bond issues and the mandate to finance debts through the markets only apply to issues that are carried over beyond the fiscal year in question. They do not apply to Ministry of Finance securities and interim financing used to smooth out the treasury’s cash flows. Article 7 states: “When necessitated by revenues to or disbursements from the treasury, the government may issue Ministry of Finance securities or seek interim financing from the Bank of Japan.”(Tachi, 1993 pg. 108)



like certificates of deposits and commercial paper. The period for securitization of finance commenced.

Individuals, household and corporations accumulated more assets, and as pension funds and institutional investors increased, more of the money circulating within the system began to look for profitability as well as safety, which meant that much of it was now very sensitive to interest rates. This aided the shift from regulated to free-interest products, which in turn spurred further deregulation.

Parallel to internal developments, Japan started to take more room in international era. The comparative advantage of overseas markets attracted most of the Japanese funds abroad. International globalization and liberalization efforts throughout the world obviously assisted new movements in Japanese financial sector as well. Starting with mid-eighties, huge deficits of public sector were replaced by foreign sector deficits. Capital outflow boosted.

Although deregulation and internalization of financial markets had many advantages for Japanese economy, they also caused some unpredicted problems that still prevail in the financial market. On the one hand, all actors of the economy benefited from range of activities and numerous portfolio alternatives, on the other they faced moral hazard problem and became more sensitive and fragile to the fluctuations in the market.

However the fiscal authority did try not to loose fiscal responsibility and did not trap itself with fiscal ossification. Parallel to the fast changes in financial market during mid-eighties, the government set itself a goal of rebuilding the national finances and worked to make the necessary spending cuts. Overall, adverse effects of high public borrowing, perhaps, might not have influenced Japanese economy as it would have been

expected by economic theory. Nevertheless the perpetuation of fiscal burden led to immense and rapid changes in the structure of the financial market.

The volume of fiscal burden between mid 1970s and late 1980s did not only lead to changes in financial market, which was one of the main reasons of the Bubble, it also played a crucial role in forming the Bubble started in 1985 in Japanese economy. In 1985, Japanese Yen dramatically appreciated. That was a tremendous shock for a economy which had experienced steady, export driven expansion up to date. Government immediately responded and eased the monetary policy drastically. The discount rate set below 2.5% which was the lowest in post-war period. This expansion in monetary aggregates was accommodated by expansionary fiscal policies that had been enacted previously to stimulate the domestic demand. The ease of monetary and fiscal aggregates stimulated the domestic demand more than enough.

Japan overcame the effects of appreciated Yen in short time. Yet the effects of ease of monetary policies and existence of high public expenditures prolonged. Besides to main macro economic indicators<sup>24</sup>, policies also affected stocks and share prices. Share prices and land prices started to rise. In 1987, the global crisis began in NewYork stock exchange caused G7 countries to force BOJ to keep easy monetary policy to get rid of the possibility of global recession. The effects of crisis prevailed only six months in Japan. Economy began to speed up again. In early 1988, the bubble in market took place. The

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<sup>24</sup> The real growth rate for capital investments between 1987 and 1989 was reminiscent of the high-growth sixties. Price levels, however, were stable at both the wholesale and consumer levels. At that time, rising exchange rate and falling prices for oil and other raw materials helped price level to stay stable. As the economy geared up, the full employment rate went from 2.6% in 1986 to 2.1% in 1990; the ratio of job offers to applicants from 0.65 in 1985 to 1.4 in 1990. As the labor crunch grew more serious, wages began to rise more quickly (Tachi 1993, pg.197).

gap<sup>25</sup> between prevailing prices and theoretical or fundamental prices began to become bigger even though it was in acceptable limits. In 1989 BOJ increased the discount rate and the Bubble began to burst.

The first important cause of the bubble was the optimism about the economic environment. Due to easy monetary policies, interest rates became lower and lower. Both interest costs and risk premiums were low while share prices were raising. Secondly, this optimism was felt among industrial and financial institutions and household as well. Higher capital investment for corporations, lower lender risk for financial institutions and higher return for everyone. Internalization and globalization parallel to internal developments also supported the bubble. The third cause was a shift of capital from long term positions to short term ones. Short term trading forced prices up beyond their normal level. Lastly, the bubble accelerated deregulation, which had already been started to absorb the increasing public sector share in financial markets during early eighties.

The most detrimental effect of the Bubble was the relaxation of financial markets<sup>26</sup>. This effect still dominates the Japanese financial market. The absence of disclosure has worsened every other day. Today, lack of disclosure still prevails and unfortunately sometimes might be worsened by government. The last two laws by Diet

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<sup>25</sup> Assets prices depend on the income streams from expected interest rates and expected dividends or on this term's dividends, expected prices at the end of the term, current interest rates and the risk premium. Generally, the premium charged when economic conditions are stable and market participants expect relatively calm share price fluctuations is considered the "normal premium" and from this is extrapolated a "theoretical" or "fundamental" price.

<sup>26</sup> They became lax in their screening and examination of lending and underwriting proposals. In fact, they became overly aggressive in their efforts to place loans, and rather cavalier in their underwriting. A vicious circle ensued: easy lending caused the prices for land and shares to rise, which increased their collateral value, which convinced institutions to loan even more money against the "new" collateral. After the bubble ruptured, several banks became embroiled in scandal and it was learned that securities houses routinely made up losses to their larger investors (Tachi 1993, pg. 201).

for example leave the question open whether such capital injection were the right thing to do when the absence of disclosure still persists.

In early 1990s share prices crashed and the crisis was augmented by the Gulf Crisis. Economy started to slow down. The real GNP growth decreased, capital investment decreased to 2.2% which used to be 12% in 1990. The roots of current recession began to spread out. The longevity of bubble period and steady growth period before the bubble affected the economy more than it would affect. Although it was expected that easy monetary policy would gear economy up, demand was not effected at all. Due to the weak consumer demand, main industries began to contract their activities. Business sector could not adapt well enough to changing structure. People invested in ill-advised areas. Aggressive lending practices kept ongoing, risks were underestimated and unique nature of Japanese competition misled companies and financial institutions. Decreasing asset prices squeezed consumer demand more. In time, those mistakes were understood. Lender's risk increased. Therefore, institutions became more cautious about making loans, and securities companies are more wary about underwriting new issues. Credit crunch occurred.

BOJ lowered the discount rate. Yet this action did not effect the economy as it would have been accepted. Due to the structural change and risk averse behaviors, monetary policy became ineffective in the market. Japan's traditional bureaucrat-led economics started not to work anymore. Some of the policies the fiscal and monetary authorities have turned to in their quest to avoid a crisis of confidence in the credit system started to trouble their own right. The speed of deregulation in financial sector did not cause any change on the traditional relationship between the monetary authorities and the

financial sector. This and the existence of protection as a result made financial institutions much more irresponsible in their operations.

Kaji (1999) argued, however, wrong policies taken so far were not the only reason even though they did play role in bringing down the economy to current situation. The recession was and is also a manifestation of fundamental change that would have occurred sooner or later due to changing structure. According to her, “the old, self-sufficient system breaks down. It must be replaced by a new system that is more open and comprehensible to outsiders”.

#### **4.2. Recent Situation, 1993-**

Japanese saving rate has historically and traditionally been known as being high compared to other countries' saving ratios. Special characteristics of Japanese system such as efficiently working postal system and the mechanism of government insurance on deposits on the one hand and risk averse psychology of Japanese people on the other has always kept saving ratio high. This did not create any problem until 1990s and eliminated by the huge rate of investment and capital export through balance of payment. But, recently, firms do not invest and people consume less than ever. More importantly, as far as observed, people are scared about their future and try to save more. This pushes Japanese economy into Liquidity trap more and more every other day. Challenges to stimulate economy through Fiscal and Monetary policies do not work anymore. Japan budget deficit is breaking records compared to previous periods. This might have another discouraging effect on economic agents because people rationally know that the more debt of government today will cause more tax in the future. One of the reasons is to be

scared of future and save more. Moreover, Ricardian equivalence works in Japan and tax cuts do not stimulate economy. Because people know again that cuts will cause more domestic borrowing in the future. One more reason to save more. However the implementation of permanent tax cuts with explanatory monetary policy can be thought at extreme.

The government of Japan still emphasizes on fiscal stimulus via increasing public expenditures and employing tax cuts further against the current recession but How much more fiscal policy? When Keynes proved the ineffectiveness of monetary policy under the circumstance of Liquidity trap with respect to rigid feature of prices and wages and, advocated fiscal policy as a survival kid, he did not probably foresee such a situation that Ministry of Finance of Japan faces nowadays. Japan has already had too much of fiscal burden in her economy and more of it may both weaken the credibility of fiscal policy and worsen negative expectations for future.

Monetary policy on the other hand looks quite ineffective in stimulating economy and basically rationalizes what Keynes had said years ago. Bank of Japan has been known as one of the least independent central banks for years. With the new Law, however, it has obtained its independence and broke the fiscal dominance of Ministry of Finance (MOF) in monetary policies. However it is still in coordination with MOF and other temporarily constructed institutions such as Financial Reconstruction Institute to survive collapsed financial institutions. Perhaps, it behaves such an intermediate agent under the dominance of fiscal authority and does not monetize this capital injection. Yet it unconsciously or consciously helps to worsen the inherited problem of Japanese financial system. - Moral Hazard-. As it will be explored more in detail at the following parts of

this paper, one of the major problems of financial system of Japan is moral hazard and, hence the lack of disclosure in the operations of financial institutions. Bank of Japan probably had to take part in this operation because it was probably a task assigned by the Laws that Diet passed to survive those institutions in bankruptcy. Perhaps, this capital assistance was one time favor to those institutions, nevertheless I did not hear any rule that restricts Diet to convey such an operation again in the future, or announces the assistance as a major cleaning up operation to stabilize the financial sector, yet it was wrong. It will certainly triple the moral hazard and lack of disclosure problem in the financial sector and will not better off the current situation at all.

My concern is here that monetary authority can be used more efficiently under the current situation. Instead of trying to stabilize temporary financial needs of market and weakening its credibility, Bank of Japan should plan in med-long terms, and should use its credible position among public and its policy tools to relieve the current recession permanently. Although Bank of Japan was under the fiscal dominance of MOF for years, it has attained high level of credibility in terms of price stability and inflation. The commitment of Bank of Japan to price stability can be used the other way around. This time Bank of Japan commits to inflation and promises public some certain level or band of inflation. This will not affect the credibility of Central Bank among people as long as the operations of Bank of Japan and rationale of such a commitment is explained to public in the most transparent way. Since people observed previously that Bank of Japan had always stucked to price stability and not allow inflation to break out, they will also feel confident that some inflation will be around unless the economy performs as well as before. Since the nominal interest rate has reached to zero, the expectation of inflation

will make the real interest rate negative meaning that borrowers will pay less in real terms than the amount they borrow<sup>27</sup>. As a result people will be willing to spend more. Therefore, decision making authority in Japan should realize that Japanese economy needs an inflation to stimulate economic agents. And this inflation can be created with complete commitment and sound coordination of fiscal and monetary policy. Regarding fiscal and monetary policies, there are not much left to do. Easing the monetary policy and increasing the fiscal expenditures at the same time do not stimulate the economy and is not enough to abolish the ongoing severe recession. Economy needs something new. Something requires a certain period of time and patient.

### **5. Does Japanese economy need Inflation**

So far, it has been tried to explore the background of the current situation in Japanese economy. No need to overwrite again about the ongoing weakness of fiscal and monetary policies in stimulating the economy in Japan. Yet an overall highlighting of recent problems may be a good start for a new proposal. First of all, as already mentioned, current situation in Japan is not a typical recession or down of the business cycle. If it were, monetary policy would be working as it did previously. The current situation is a massive Liquidity trap that was gradually formed in time and recently worsened by adverse (pessimistic) expectations. The pessimistic approach of actors of economy on the other hand is quite understandable. For the last couple of years, people has known that Japanese economy has too much corporate and public debt, commercial banks and financial institutions refuse to face their loses, massive bank reform is necessary, pension

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<sup>27</sup> Famous equation in economics; nominal interest rate is equal to the summation of real interest rate and



fund system does not work efficiently and there is an excess capacity in all sectors. These are not cases that aging society of Japan confronted before. The result is a Liquidity trap.

As stated above, under this circumstance, Japanese economy needs something new that will attract people's attention again. In order to get away from this slump and attract people attention, negative real interest should be provided. Regarding that nominal interest rates are almost zero and cannot go below zero, then, economy needs inflationary expectations assuming the real interest rate is to be held constant to stimulate the economy. And, the most appropriate way to attain inflationary expectations in future is to do it officially with the good coordination of monetary and fiscal authority. Then the reply to the question asked above is Yes; Japan needs inflation. In that case, inflation targeting might be a good remedy for Japanese economy.

Negative interest rate seems like the only way out even though, it sounds quite ad hoc. However it is quite obvious that this aging community and the economy in slump needs something that motivates them to consume and invest more. Well, intuitively, negative interest rate means that borrowers are to be expected to repay less in real terms so that they will spend more and the sluggishness of demand will be destroyed. In time the extending gap between rising saving ratio and diminishing investment level will be closed. People will know that if they do not spend or invest at present time, it will be more costly for them in future.

Yet, making this mechanism work, some commitment is needed to make people of Japan believe that price level in Japan will not be as stable as it used to be. Some inflation will be expected. BOJ and other economic decision making authorities ought to

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inflation expectations.

announce people that Japanese economy needs to have some inflation to stimulate the economy and needed inflation will be generated. The best way to gain confidence of people for such a radical change is to announce an inflation targeting program and strictly commit to it in time.

Though, it is obvious and easy to argue that creating an inflation in an economy having huge slump is not as easy as it would be under normal circumstance. In other words, in Japanese case, ongoing weaknesses in financial market, uncertainties about structural changes and immense fiscal-monetary stimulus might not affect the prices and hence the real economy as they would have an immediate push in prices in any other economy. So, the question is whether the actions that the government may take to increase inflation expectations, and financial instability, would have symmetric influences on prices, as if they would have been implemented to reduce the price level, or asymmetry is to be accepted on the behavior of prices under the circumstance of huge recession. Whether prices are also upwardly inflexible to push up as they would be downwardly to pull down.

Price and wage stickiness has long been assumed by Keynesian economists as one of the key stylised facts. That prices and wages rise more readily than they fall has also been a widely-held view. Friedman and Phelps also pointed out the downward stickiness of prices in their famous criticisms to Keynesian policies regarding the short term trade off in conventional Philips curve. They argued that the unemployment rate is dependent on the difference between the real inflation rate and expected inflation rate. So, any attempt to increase the level of employment when inflation expectations are zero would cause stagflation due to downward stickiness of prices and inflation expectations of

employees for the next period. In detail, first, the government adopts expansionary policy, probably fiscal policy, and causes a shift in inflation expectations. People begin to expect prices to rise, short term Philips curve shifts up as well. But in order to keep new employment level up to expansionary policy in the beginning, government must accelerate the inflation rate again. Even if the authorities try to stop inflation at this point, there will still be strong rational inflationary expectations and prices will not go down very rapidly. The result is stagflation.

But, what if, both employers and employees know in advance the level of inflation for the next period? Then, the economy needs to close the gap between actual inflation rate and the expected one, if the theory works. In this case, Labor will not expect more inflation than the monetary authority already announced and employers will hire accordingly. So, nobody fools nobody, and in the short run, inflation targeting may cause a rise in the level of employment in the context of inflation targeting. And, it may be one of trigger effects that economy needs even in the short run.

In Japan, however, the hiring rate is recently quite low. The stimulus will start with convincing people to consume under the existence of negative real interest rate, and then this increasing demand will lead the entrepreneurs to recruit more with the help of globalization and adaptive structural changes to it. However, as stressed strongly before, making people believe that inflation is to be expected, BOJ and government must use their credibility coming from past and officially announce an inflation target. This would be the best solution to price stickiness problem.

### **5.1. How to generate Inflation**

The obvious question here is of course what policies are to be implemented to generate inflation expectations and hence inflation. As widely acknowledged, inflation is a monetary issue and expansionary monetary policy is the most direct way to pump up the inflation as long as this monetary policy is a permanent one and strongly committed to the inflation targeting. The proposition known as the neutrality of money - the assertion that other things equal the price level is proportional to the money supply. If price level in the short run are sticky, changes in monetary policy might have some booms or recessions in output level but, in the long run, the effect of expansionary monetary policy will only reflect on prices. How to make it work for Japanese case where Liquidity trap exists? This is a question reminds again necessity to inflation targeting approach because monetary policy should regain its impotency parallel to announced target level of inflation as long as people believe that permanent expansionary policy will be sustained to inflation target.

Nevertheless, one might argue that the problem of Japan is not monetary (nominal). It is something structural and/or real. In that case, some policy changes might be required. The protection on construction and agriculture sectors has to be relieved in addition to deregulation and less-protection in financial sector. People perhaps were helped by the government to purchase a house because only few people can afford buying a house in Japan. Because Japanese people believe that land prices never decline. This is not only due to the scarce of land in Japan but is ,I suppose, also due to the protection going on in this sector. Besides to improvements that must be achieved in social security and pension fund system, the openness of all sectors of Japan domestically and internationally has to be considered. One might ask under this circumstance that How

inflation framework will work while some prices have already been too high in Japan. The reply to this question can be given by asking another question that whether the artificial increases in prices of some commodities in Japan due to the Bubble could have been that high if the inflation framework and/or structural changes would have been implemented earlier? The inflation targeting in Japan should not only aim to increase the inflation expectations to activate the economy in shorter period, but, after economy gears up, it should also be used to maintain the price stability in longer terms.

As a matter of fact, huge public expenditures and transition period to new banking sector reforms and the existence of huge corporate debts and aggressive deregulation may help to the task of creating inflation in Japanese economy as well. However, as stated above, the issue of asymmetry due to the living recession might destroy the usual effects of these instabilities on prices unless strong commitment to inflation framework is provided.

One caveat, however, is that Japanese government should decide what it's first privilege is? Keeping Yen strong to reach the goal of internalization of Yen or setting inflation targeting method and trying to get rid of this slump first. It is observed that Japanese government would like to keep the exchange value of Yen within a certain range. The aim is to stabilize fluctuations in Yen to provide internalization of Yen at least in East Asia. Another reason for aiming strong Yen is to maintain export of capital which not only helps the goal of internalization of Yen but also balances the current account surplus in the context of balance of payments. More global reason to keep Yen in its current values is the fear that if yen depreciates, it will cause depreciation in other countries' currencies as well. People foresee a chain reaction that Yen depreciates and

Yuan follows it and depreciation becomes contagious among other currencies. However these reasons listed causes trade off with inflation targeting policy since some devaluation of Yen is virtually expected in the context of inflation targeting. Moreover, in my view, devaluation may also be effective and necessary in the beginning stages of inflation targeting to rise inflation expectations more rapidly. Since overall inflation is a weighted average of domestic inflation and imported inflation,<sup>28</sup> any decrease in the value of Yen will increase the imported part of inflation in turn obviously pushes up overall inflation. In short, some certain level of devaluation is necessary for a commitment to inflation despite the trade off mentioned above and extreme criticisms such as possibility of collapse of Yen and immense capital outflow.

On the contrary, if one considers the famous inconsistency triangle in international finance literature that constructed by independence of monetary policy, capital movements and the value of national currency, he can easily foresee that at the expense of monitored depreciation of Yen, Japan can maintain its monetary independence and provide higher level of capital inflow in time through the expected increase in interest rates. Two out of three is expected and sound result in the formulation of this triangle.

Nobody expects an immediate and huge depreciation from BOJ. However, creating inflation expectations faster, and conveying inflation targeting framework better, BOJ should compensate some from the value of Yen. This is not only the requirement of the inflation framework that there should only be one target but it is also the requirement to stimulate the inflation expectations. By doing that, BOJ will not give up its traditional commitment and responsibility to protect the value of Yen. It will only behave

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<sup>28</sup> Imported inflation-ie inflation of the domestic currency price of imported goods and services-is strongly

irresponsible until the economy gears up. Depreciation of Yen might lead to capital outflow in the beginning stage but this will be compensated with motivating effect of depreciation on export. In time, increasing current account will cover capital outflow. Plus, the arbitrage difference due to depreciation might also attract some portfolio investments and perhaps direct investment or reduce the export of capital abroad, that all of which activates the economic behavior. This methodology might work better if Japan market opens itself more to foreign investors and to more but sound level of competition.

## **5.2. Inflation Targeting Framework for Japan**

A Proposal to implement inflation targeting in Japan

1. In the framework of inflation targeting, the way of announcement and the level of coordination among authorities play very crucial role. Considering the effectiveness of Diet on economic decisions and fiscal dominance of MOF, the legislative procedure in which the responsibilities of each entity explained in detail ought to be run for Japanese case. BOJ must be the only entity that monitors and controls monetary policy instruments. However, the mutual agreement between MOF, BOJ and the Government on the level of target and the implementation period of targeting must be attained and announced to public as a Law. The promise of no deviation from the target should be given and guaranteed by legal procurements. This will rise the credibility of inflation targeting and enhance the transparency.

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influenced by real exchange rate movements.

2. Contrary to other country experiences, Japan should employ inflationary policies and monitor them, as a transition period, before publicly announcing the target and the time frame. Policies mentioned above should be taken into account carefully, and some compromises on issues such as depreciating Yen and/or increasing capital outflow have to be made. In Japan, it seems like inflation targeting would work up side down. Its interaction with other policy goals will be unique. It will probably not contract real figures and/or increase the level of unemployment, as it might in other countries, on the contrary, it will gear up real figures in mid-long terms and diminish the unemployment level. This distinguished characteristic of inflation targeting in Japan has to be explained economic agents of economy that adopting inflation targeting to push it up rather than try to bring it down, like other countries, will be temporary, and when the economy speed up again, price stability will take place.

3. Horizon of the target has to be at least three or four years including implementation period and monitoring period of inflation expectations. After necessary inflationary motive in the economy is obtained, the certain time frame for a point or band of a target can be set. Other structural changes going on in the economy should be significantly taken into account in determining the horizon of the target.

4. In Japanese case, having a broad band with a mid-point of 2.5-3% might be more beneficial than having a certain point of inflation target. Regarding the deepness of recession and other instabilities such as moral hazard and disclosure problem predominating financial markets, high debt levels of corporations, and fear of household



about future, it is better for BOJ to adopt a wide range of targeting. This enables BOJ to manipulate the market better and leaves place for discretionary policies to reach an ultimate target. As mentioned before, narrower band requires higher changes in monetary instruments to attain the goal. Wider band, on the other hand, enhances the ability of monetary authority to monitor and maneuver. The reason that the range having 2.5-3% mid-point has been recommended depends on the arbitrary observation. When the last two decades of Japanese economy is observed, it is quite obvious that Japan economy did very well when inflation rate was within the range of 4 and 6%. However declaring a certain range certainly requires much more sophisticated empirical analysis.

One more reason to advocate such a mid-point is the possibility of asymmetry in prices. If nominal interest rates are bounded to zero, then negative real interest rate takes place and it will also be bounded with the floor of the band. If this is the case, the optimal centre of the target inflation range might need to be adjusted upwards.

5. The selection of price index on which the inflation target will be based is also an important issue for Japan. Contrary to other countries, perhaps, Japan had better use headline CPI rather than use underlying CPI that excludes effects of non-monetary determinants of inflation. Since Japanese economy needs inflation expectations as soon as possible, the index will be used in inflation targeting framework should include every determinants, such as mortgage interest payments, and /or mean-reverting prices<sup>29</sup>, which will provide first-round effects on price level and cause prices to rise in short term.

6. The most important part of Japanese inflation targeting framework is the transparency that must be provided by the monetary authority. Regarding all these problems mentioned above, the performance of inflation targeting is more related to the level of transparency and hence credibility of the policies than it would be for other countries. Since everything will be conveyed the other way around compare to traditional implementation of inflation targeting, authorities should be very sensitive to reactions of public. In order to maintain the credibility of inflation targeting, BOJ must commit to the target and must never deviate from it. The policy changes must announce to public periodically and inflation report should be published.

7. Inflation forecast might be performed during the implementation period. These forecast could successfully guide monetary authority for prospective and necessary changes in the implementation of inflation targeting and signal departures from the target.

## **6. Applicability of inflation targeting framework in Turkish Economy**

On the contrary to Japan, Turkey has been living with high inflation rates for the last decade. Therefore, the initial stage of inflation targeting framework in Turkey will be parallel to that of other countries' experiences if, one day, a successful disinflation period is implemented. In fact, the government and all economic decision making institutions in Turkey has been aware of ongoing inflation problem for years, but, unfortunately, any major success to disinflate the economy could not have been reached so far. However, the memorandum announced by the Turkish treasury in June, 1998 carries some distinct

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<sup>29</sup> Prices tend to be highly volatile in short terms but are generally thought to be fluctuating around the mean

features compared to previous packages that were run to decrease the inflation rate. This time, the government realized the importance of transparency and officially announced its economic targets for the year of 1999. The targeted inflation rate by the end of year, and policies will be implemented were openly published and, more importantly, the government has not deviated from its commitment so far. Although Turkey has still a bid to go to implement hard inflation targets, the efforts taken by authorities recently, written below, lightens up the way to successful disinflation period and prospective inflation targeting in the end.

Following sections include the recent macroeconomic outlook in Turkey, economics of fiscal deficits and hence inflation and a preliminary proposal for inflation targeting in Turkey.

### **6.1. Recent Macro economic Outlook**

The following quoting is taken from the memorandum announced in June, 1998. It seems that inflation targeting framework might be implemented in Turkey if such decisions are kept to be taken and strictly followed. Although this memorandum was not meant to be written or announced for inflation targeting at all, prospective actions phrased might easily be assessed as benchmarks for thorough disinflation period and inflation targeting afterwards.

“Chronic high inflation has plagued Turkey for over two decades. Past programs designed to fight inflation have never been successfully carried through, or were subsequently reversed. Inflation imposes a heavy burden on the economy and society, worsening the inequality of incomes, exacerbating social tensions, and distorting the planning horizons of investors and savers. In consequence, the economy operates under the constant threat of instability, discouraging foreign and domestic investment. Even

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in long run.

worse, the chronic weakness in the public finances, resulting from an inflation-eroded tax base, has limited spending on basic education, health, and infrastructure.

Large budget deficits lie at the heart of the inflation process. The financing of these deficits has accelerated money growth, as well as imposing high real interest rates. The pressure of government borrowing, in turn, has locked in inflation expectations and projected them forward in the form of high interest rates. Basing increases in public sector wages and agricultural support prices on past inflation has contributed to inflation inertia. The policy of safeguarding the real exchange rate and expanding the money supply in line with expected inflation further reinforces the process. Changing this entrenched pattern of behavior requires concerted action on many fronts.

Since taking office, the government has applied measures to rebalance the economy and reduce inflation, and has devised a three-year program that is designed to bring down inflation on a lasting basis. With the announcement of the 1998 program, and in light of the first and second quarter results, we are confident that the program is operating as designed. The autonomy of the central bank is fully respected. The Treasury has ceased to borrow from the central bank, and the central bank, Treasury, and the Ministry of Finance have published their respective quarterly program targets. To date, all targets have been met and in some cases surpassed. Support for the program from the private sector and the labor and employers' unions continues, with an ongoing dialogue maintained at all times. The government is strongly committed to ensuring transparency and adhering to market policies."

The main policies to achieve the planned reduction in inflation are: (i) an increase in the primary surplus of the budget, that will be sustained during the disinflation process; (ii) a shift in the management of key variables such as public sector wages and agricultural support prices so that they are raised in line with targeted, rather than past, inflation; (iii) a supportive and closely coordinated monetary policy; (iv) structural reforms to ensure the progressive strengthening of public finances over time; and (v) stepped up privatization to lower the domestic borrowing requirement and enhance economic efficiency.

Besides to these policies mentioned above, Government plans to take courageous decisions to make simultaneous and drastic transformations in many fields. Concerted and coordinated efforts are needed to effectively restructure and reinstitutionalize major government agencies and reduce the public deficit.

Maintaining fiscal discipline and stopping fiscally stimulated inflation expectations are directly related to the completion of three vital conditions; performing structural reforms urgently needed in the economy, generating and/or raising revenues from privatization, and changing the financing method of the deficit.

In the structural reforms side, the tax reform that will expand the tax base and improve tax collection performance is on the agenda of the National Assembly. The discussion on the reform of social security institutions also continues. The completion of this reform will support the efforts of controlling the public expenditures<sup>30</sup>.

Stabilizing the economy strongly depends on the creation of new resources and the ability to use them efficiently. Privatization will undoubtedly provide efficient allocation of resources. When the objectives of privatization is taken into consideration, the privatization of SEEs is of high priority in the macroeconomic management to reach overall economic development and stability.<sup>31</sup>

Finally, the Treasury intends to change the method of financing of the deficit in a way to help reduce the inflation. In the past, domestic borrowing made by the Treasury to finance the deficit has continuously increased the pressure on the financial market. Recently, yields demanded on government securities reflect inflation expectations and a

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<sup>30</sup> A tax reform bill was submitted to parliament early 1998. This bill will shorten the lag between the accrual of tax obligations and their payment, while lowering tax rates in expectation of a widening of the tax base. There is a danger that the lowering of tax rates could jeopardize the achievement of the program targets unless compliance improves. In view of the key importance of fiscal restraint to the success of the anti-inflation effort, the government will not accept any retroactive tax cuts affecting the programmed level of revenue and will delay rate cuts in 1999 and beyond if tax compliance and revenue performance fall short of the targets. Additional measures will be taken, as necessary, to ensure the achievement of the programmed revenue targets.

A sweeping reform of the social security system is obviously needed. The Turkish economy can simply not afford a system that permits workers to retire in their forties. And retired workers cannot afford to live on the benefits now provided by the system. The government will continue its efforts to forge a consensus for major reforms that would eliminate the deficit of social security within a relatively short period through appropriate increases in the minimum retirement age and minimum contribution period, and an expansion of the reference period for calculating pension benefits coupled with an increase in the ceiling on wages subject to contributions.

<sup>31</sup> Privatization has a key role to play in the disinflation strategy. Major progress has already been made, with a total of US\$1.8 billion in privatization proceeds already realized through the sale of GSM licenses,

high premium to protect investors from the risk of an increase in inflation. In a process of disinflation, when expectations lag and the risk premium remain high, the real interest burden rises sharply with falling inflation, and increasing the size of the primary fiscal adjustment needed to keep the overall deficit on a downward path. Today, it is clear that this can not be sustained anymore. Therefore, the government now relies on the external financing and the privatization revenues in re-establishing the budget balance, and realizes that it is essential to lower inflation expectations quickly as well as to use alternative ways of financing to minimize this crowding out and roll over effect both on real and financial figures. Otherwise the need for additional primary adjustment is continuous<sup>32</sup>.

As for the monetary policy, CB aims to ensure stability and reduces uncertainty in the financial markets. It tries to prevent rapid short-term price movements by ensuring the prices in both the foreign exchange and TL markets to be formed in accordance with the general macro economic balance. The policy of reducing the volatility of the interest rates in the interbank market is adopted in line with the stabilization aim. The foreign exchange

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shares in I\_ Bank, and other operations. The aim is to generate receipts of at least US\$3 billion this year, and at least a further US\$3.6 billion (and very possibly well over US\$5 billion) in 1999.

<sup>32</sup> In the area of fiscal policy, the primary surplus of the budget will be increased. This increase is needed to face the heavy burden of interest payments that is now unavoidable. Because of the bulge in interest payments, the overall fiscal deficit in terms of GNP will remain about unchanged from previous years, despite the strengthening in the primary balance. This is why achievement of the targeted improvement in the primary balance is essential to the success of the disinflation effort.

Improved tax revenue performance is a key element strengthening the primary fiscal position. In implementing the budget, the government will strictly restrain primary outlays to ensure the attainment of the targeted improvement in the primary surplus. Non-interest expenditure will be limited for the year as a whole to no more than TL 9,255 trillion (17.5 percent of GNP). Transfers will be much lower this year than last, reflecting the lower need for transfers to the extrabudgetary funds, tight controls on agricultural subsidies, and the one-off nature of the capital injections to state banks made in 1997. For the first time in many years, there will be no supplementary budget in 1998.

In a major shift in policy, public sector salaries and agricultural support prices are now being adjusted in line with the targeted reduction in inflation. Public sector salaries were adjusted by 30 percent in January, and will be increased by no more than 20 percent in July.

policy of the CB is based on maintaining stability in the foreign exchange market. TL has been allowed to depreciate not more than inflation differentials.

Controlled reserve money growth constitutes one feature of the CB's monetary policy practice. It means that the source of the reserve money increase comes from the rise in the foreign assets of the Central Bank and not from the increase of its domestic assets. Plus, in a period in which fight with inflation is planned, the control of the monetary aggregates gains importance; and in this context, the programmed increase in reserve money is in line with growth and inflation targets. The protocol signed between the Treasury and CB in 1997 will also help in reducing inflation and increasing the transparency and the effectiveness of the policies.

Monetary policy will be directed at sustaining the disinflation effort. Given the difficulty of projecting the behavior of demand for base money in a period of disinflation, the monetary framework under the program will place greater emphasis on control over the growth of net domestic assets of the central bank. The expansion of this aggregate will be kept under tight restraint, including the continuation of the policy that the central bank not extend credit to the public sector<sup>33</sup>.

The government will take measures to strengthen the banking sector and supervision through more stringent enforcement of capital adequacy requirements and of the ceiling on banks' net open foreign exchange positions<sup>34</sup>.

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<sup>33</sup> The central bank plans to intervene less aggressively in managing day-to-day liquidity, allowing short term interest rates to move more freely. The foreign exchange surrender requirement has been suspended for two months starting in June 1998. The central bank will consider extending this suspension in light of market developments.

<sup>34</sup> In order to reduce distortions, the government plans, before the end of the year, to subject repos to the same reserve requirements as bank deposits, and to equalize the taxation of interest income from repos and

In short, the government will continue to follow a tight fiscal policy to generate an adequate primary balance, forward indexation of public sector wages and agricultural support prices, a closely coordinated and supportive monetary policy, further structural reforms and stepped up privatization. All of these mentioned above construct an adequate basement for appropriate disinflation period, necessary and sufficient condition before inflation targeting.

## **6.2. Some Economics about Turkey**

Parallel to many country experiences, fiscal deficits are also considered as one of the most significant indicators in Turkey. In several articles, they are not only expressed as the main reason of the continuing inflation but are also identified as one of the most damaging bottlenecks of the economy. Since fiscal deficits are needed to be financed, the economy is either forced to transfer available financial sources to the increasing needs of public sector or to keep borrowing at higher rates. Either way, private sector and/or the rest of the economy crowds out. The increasing debt burden requires Treasury to borrow

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deposits. The gap between the average cost of funds and the average rates charged by the agricultural bank (Ziraat Bankasi) on its loans to the agricultural sector has been substantially reduced over the past year, and the recent further decline in deposit rates will make possible a reduction of 5 percentage points in the average rate charged on agricultural loans as from July 1, 1998. Thereafter, interest rates on agricultural credits will not be lowered until they are equal to Ziraat's average cost of funds, and from that point on will be kept in line with funding costs.

The Draft Law for Regulation and Supervision of the Financial Markets was submitted to the Cabinet of Ministers on June 18, 1998. The aims of the draft law are: (i) to bring the regulation and supervision of banks, insurance and re-insurance companies, and other financial institutions under a single set of rules and a single law; (ii) to strengthen the financial structure of financial institutions; (iii) to strengthen and increase the efficiency of the supervision and oversight authority; and (iv) to keep supervision standards in line with international norms. The draft law was prepared taking due account of the laws and regulations of the European Union and other accepted international practice. The government intends to secure passage of the draft law as soon as possible.



at increasing rates and the borrowing program unfortunately starts aiming to find additional funds to finance the previous borrowing<sup>35</sup>.

Regarding inflation targeting framework in Turkey, the initial stage, of course, is to ascertain a successful disinflationary period and reduce inflation to moderate level before commencing to announce an official inflation targets and using inflation targeting as a nominal anchoring policy. However, before going into details of any possible inflation targeting framework, and reaching the goals of the memorandum mentioned above, Turkish economy needs to fulfill three prerequisites in her disinflationary period; attaining inflation again as a monetary phenomenon, constructing good coordination between monetary, fiscal authority and the government, and maintaining credibility of policies among people.

The major problem with respect to inflation targeting is the existence of fiscal inflation in Turkey. The immense fiscal burden and hence fiscal dominance not only feeds the inflation expectations but also makes the inflation fiscal phenomenon.

The outstanding debt stock of Turkey comprises of securitized and non-securitized debt. Securitized debt consists of Treasury Bills and Government bonds issued

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<sup>35</sup> As thought in every introductory macro class, Government expenditures are one of the injections which influence the aggregate demand components of the economy. In order to set the general equilibria, tax revenues as being the corresponding component at leakage's side, *ceteris paribus*, either has to increase or the other two components investment and/or export has to decrease (Saving and Import held constant). When the public sector runs a deficit, it must be financed by the private sector or the rest of the world. Therefore, the balancing of the public sector's requirements with both the financing needs of the private sector and sustainable trading relations with other countries is a crucial element of fiscal policy in the pursuit of stability and growth.

in return for financing fiscal deficit and compensating off budget liabilities. Non-securitized debt on the other hand is raised from STAs and CBT valuation losses.<sup>36</sup>

To examine the long-term consequences of running deficits, the common identity as follows;

$$\Delta b = b(r-y) - z > 0 \text{ where;}$$

$r$  = real, or inflation adjusted , interest rate

$z$  = non-interest or primary budget surplus measured as fraction of GDP

$y$  = growth rate of real GDP

$b$  = debt-income ratio<sup>37</sup>

By manipulating the equation above by including the seignorage affect on budget deficit we can attain the following equation in which prospective debt dynamics can be seen better in terms of policies to be pursued.

$$\Delta b = z - s + (r-y)b \text{ where;}$$

$s$  = seignorage over GDP<sup>38</sup>

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<sup>36</sup> Those losses occur when FX liabilities of CBT is larger than its FX assets and when TL depreciates against the other currencies in which liabilities are held. Under these circumstances CBT balance sheet registers a potential loss and this is debited to the Treasury as the main share holder in CBT according to the article 61 of the CBT Law. Large accumulation of CBT valuation losses create problems in control of magnitude of the CBT balance sheet. Treasury issues papers in return in order to make CBT able to use them in OMO to control the liquidity.

<sup>37</sup> The evaluation of the debt-income ratio thus depends on the relationship among the real interest rate, the growth rate of output, and the non-interest budget surplus. The higher the interest rate and the lower the growth rate of output, the more likely the debt income ratio is to be rising.

<sup>38</sup> Money printing is associated with inflation. The printing of money at a rate that exceeds the demand for it at current price level causes excess cash balances in the hands which eventually incises price level. The printing money can be seen as the revenue for government to finance the deficit. This revenue called as seignorage is determined by demand for domestic money and real growth rate with respect to inflation and income. At moderate inflation rate, government may obtain certain amount of money by printing money and use it for financing budget deficit. However, the seignorage draws Laffer curve as long as the inflation rate increases due to diminishing demand for domestic cash balances. After a certain point of inflation rate, seignorage becomes a mechanism feeding inflation rate and causes to hyper inflation rates. Foreign borrowing causes external debt crisis on the other hand. External borrowing pressures on exchange rate and

This equation has a simple intuitive explanation that the non-interest deficit has to be financed with new debt to the extent that this deficit exceeds the amount of money creation by the Central Bank. In addition, nominal interest expenditures have to be refinanced with new debt. But since the denominator of the debt ratio is nominal GDP, the debt ratio will decline either with inflation or with real GNP growth in the absence of borrowing (see Fischer, Easterly.) The dynamics of debt and the sustainability of deficits are particularly affected by the difference between the real interest rate and the growth rate of GDP (Anand and Van Wijbergen 1989). The debt dynamics are unstable and it becomes impossible to run a permanent primary deficit that exceeds the amount of revenue the government can obtain through seignorage. If the government is running a primary deficit that larger than the amount of seignorage it can obtain, and if the real interest rate exceeds the economy's growth rate, the debt to GDP ratio will continue rising without the limit (Fischer 1990). At some point it will be impossible for the government to sell its debt and end up by cutting the deficit. through seignorage.

What would happen if the deficit were so large that the ratio increases without the limit. Ultimately, the public debt becomes so large, interest payments takes up so much of the budget, and crowding out becomes so persuasive that some actions has to be taken to balance the budget. This might involve inflation, special taxes, or highly unpopular major cuts in government spending. Sargent and Wallace pointed out in their famous paper that "debt financing of a deficit may in the long run be more inflationary than money financing." The argument basically says that government will not be able to finance permanent deficits through taxes or more borrowing and print money. Suppose,

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appreciates it. This causes to deteriorating current account balances. Domestic Borrowing causes increasing

government decided to finance the deficit with continuing borrowing and does not use the tool of money printing. This will cause increasing budget burden in future and finally monetary authority prints money to keep the deficit constant. If the future level of deficits are held constant, the increased printing of money in the future will mean more inflation in future. Then, the expectation of future inflation increases current inflation. Sargent and Wallace shown, it is even possible in certain circumstances that the effects of the expected increase in future inflation outweighs that of lower rate of money printing today, so that an apparently contractionary monetary policy today will increase current inflation. This is an unpleasant result for monetarist since deficits can also be the reason for inflation rates even though it is a monetary phenomenon.

Therefore, actions aiming significant cuts in expenditures and increases in primary surplus in the memorandum are required to be achieved. This is not only a precondition to implement any successive nominal anchoring approach, which adversely affected by inflation expectations under such circumstance, but it is also a required remedy to attain substantial disinflation period for the sake of any economy.

In order to pursue an effective and adequate debt financing program requires good coordination between the debt manager and the monetary authority. For Countries where the financial sector is not big enough and very sensitive to any fluctuation, the thorough coordination is seen as the most substantial factor to maintain the market smoothness. As a matter of fact, close coordination has to be set between Monetary authority (Central Bank) and Fiscal authority (Treasury) to implement sound fiscal and monetary policies in

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interest rates and consequently larger deficit and lower investment levels.

harmony. This coordination is imminent especially for countries, like Turkey, having high inflation rates and persistent deficits.

Meanwhile, the objectives of both parties do not contradict with each other in setting such a coordination. While Treasury aims at minimizing interest cost of deficit financing and performing borrowing at longer maturity, Central Bank aims at maintaining the stability of the domestic currency. This of course necessitates accurate liquidity forecasting. At this stage, Treasury and Central Bank should be more responsive to the market in terms of setting interest rates, assessing the demand for government securities, availability of sufficient government paper for Central Bank to carry out open-market transactions to control the liquidity in the market. This requires vivid flow of information and common understanding over issues to set a satisfying and correct liquidity forecasting.<sup>39</sup>

The last prerequisite is the issue of credibility. The announcement made through internet gives enough transparency to authorities to promote the credibility of policies pursued. But, achievement in disinflation period and consequently in inflation targeting requires a strong commitment to promises. Since the issue of credibility is time inefficient<sup>40</sup>, authorities must stick to their preannounced program and should not discrete. In that manner, inflation targeting may help a lot to Central Bank of Turkey where inflation expectations are quite sensitive and volatile and there is inherited lack of confidence to monetary authority.

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<sup>39</sup> While the Treasury holds much of information on government cash requirements and the deficit. Central bank has direct access to the information regarding banking activities, government debt rollovers, market conditions etc.

<sup>40</sup> Any deviation from target runs credibility of authorities immensely. It takes much longer to restore an adequate level of credibility again.

### **6.3. A proposal for the implementation of inflation targeting in Turkish Economy**

Regarding to the methodology of inflation targeting framework explained in the first section, A proposal to implement inflation targeting in Turkey ought to be comprised of following features;

1. An extensive research of inflation targeting theory indicates that monetary authority of the inflation targeting country has to have a certain level of independence from the government and interests of other decision making authorities. Although some discretionary monetary manipulations regarding short term domestic shocks domestically are expected, the must precondition to implement inflation targeting is to have complete freedom in choosing the instruments to achieve inflation target. However mutual agreement between monetary authority and the government both in determining the target and announcing it is commonly experienced.

In Turkey, the announcement of such programs mentioned above has been made by unanimous agreement of all institutions. Nevertheless, such an independence, mentioned above, of monetary authority is still absence. Although the use of central bank's sources in budget financing was reduced by Law from 15% to 3%, the central bank of Turkey is technically still under fiscal dominance. Therefore, as far as inflation targeting framework concerned, the first action to be taken has to be the announcement of full independence of Central Bank by Law. This ought to be done for a successive disinflation period as well. Such an action would be a substantial step to restore and/or enhance the credibility of monetary authority whereas constructing an adequate basement for inflation targeting.

As a matter of fact the treasury has technically commenced a weak form of inflation targeting by the last memorandum declared. Targets announced for the following three years can be evaluated as intermediate targets in the disinflation period. Therefore, the attainment of these targets carries significant importance for a smooth conversion from disinflation period to inflation targeting and hard target period. Because inflation targeting cannot and should not be implemented unless a substantial disinflation period is achieved. In fact, public automatically adopts itself to inflation targeting if success to reach intermediate targets or officially pre announced projections is attained<sup>41</sup>.

Hard targeting on the other hand requires additional Law. After inflation falls to moderate level, inflation target should be declared by the Central Bank with unanimous agreement of the Government and the Treasury. And this agreement is to be supported by a Law in which the level of target and the implementation period of targeting illustrated. The existence of legal procurement on such an issue is required for a country, like Turkey, where the market is very sensitive and intolerant to any discretionary policy change unless it has been known in advance.

2. No need to overwrite again that Turkish economy needs a substantial disinflation period before implementing inflation targeting. However another prerequisite that should be taken into account is the interaction of inflation targeting with other policy targets. Inflation targeting framework requires only one indicator to be targeted – inflation -. Therefore, under the circumstance of inflation targeting, some compromises in real

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<sup>41</sup> Chile followed the same strategy. Initially, inflation targets were announced and interpreted as official inflation projections, rather than as hard targets. However, over time as inflation fell, this procedure was changed and inflation targets came to be viewed by the central bank and the markets as hard targets.

figures and exchange rate policies are to be expected. Because shooting for few targets with a single monetary policy instrument poses set of problems and contradicts with the goal of inflation targeting. Some contradictions in real economy may occur in short term such as lower real growth and/or increasing unemployment rate and it can temporarily loose exchange rate objectives. Meanwhile Monetary authority may be forced to gradually de-emphasize strict exchange rate bands in favor of a policy that responds to exchange rate changes only when they are deemed likely to affect domestic prices and pay less attention to the behaviour of the exchange rate. However, inflation targeting will function as well to stabilize inflation expectations and enhance the policy transparency that in med-long terms alleviates results of inflation targeting on other economic figures.

Yet the Central Bank of Turkey ought not to deviate from the target and must commit it at the expense of deterioration in other economic figures. No discretionary policy caused by political pressure and/or demands of particular sectors of the economy are to be allowed. Although there is some place for discretionary policies in inflation targeting regarding short term shocks, in Turkey, that sort of policies have to be ignored or restricted as much as possible until inflation falls to moderate levels and inflation targeting gains its reputation in the market.

3. Horizon of the target has to be at most three or four years including implementation period and monitoring period of inflation expectations. Contrary to other countries' experiences, Turkey has to hurry to take some actions and radical decisions to decrease the inflation as soon as possible. The more frequent and more decisive actions pose higher influence and higher level of credibility in the Turkish economy. But, before



that; in emphasizing the importance of labor market flexibility and fiscal policy for macro economic outcomes, the monetary authority has to attempt to give clear signals to the public about what monetary policy could and could not be expected to achieve.

Since Turkey has sizeable public sector and persuasive indexation of wages to inflation, the frequent fiscal consolidation and the ability of wage-bargaining mechanism under such framework has to be concerned in detail. The requirement of tight policies and some compromises in income levels has to be explained to the people of Turkey who used to live with inflation for years. Other structural changes going on in the economy should be significantly taken into account in determining the horizon of the target. After necessary anti-inflationary motive in the economy is obtained, the certain time frame for a point or band of a target can be set.

4. The question whether the inflation target should be a point or a band plays crucial role in determining inflation expectations. The point targeting poses full commitment to the target and enhances the credibility issue whereas it limits operations of monetary authority against to domestic shock. And, it may be hard to attain an economy where inflation bias is vivid. Band targeting on the other hand gives more freedom to monetary economy to manipulate the economy through monetary instruments while lessens the commitment to inflation target and rises the chance of discretionary policies.

In Turkey, in my view, the band targeting should be used versus point targeting but the target should be narrow. The rationale for proposing narrow band depends upon two reasons; First, monetary authority needs to gain credibility and must be isolated from escape clauses and political pressures as much as possible. As stated before, the wider

band may cause the higher deviations from the target and the higher level of discretionary policies. Second, economies, such as Turkish economy, where high inflation expectation persists confront expectations, even after successful targeting, near the ceiling of the band. In Turkey, as well, people will probably consider the highest possible number in the band as inflation target for the next period. Therefore, the band is to be declared narrow. It would be obviously quite arbitrary to give threshold values of a band here without decreasing inflation rate to moderate levels first and running some macroeconomic simulations afterwards. Yet, it can be said that the mid-point of the band as an intermediate target should not be in a big distance from threshold values of the band.

5. The selection of price index on which the inflation target will be based is also an important issue for Turkish Economy. Parallel to countries, perhaps, Turkey had better use underlying CPI<sup>42</sup> that excludes effects of non-monetary determinants of inflation. Since Turkish economy needs to eliminate inflation expectations as soon as possible, the index will be used in inflation targeting framework should exclude some determinants, such as mean-reverting prices<sup>43</sup>, which will provide first-round effects on price level and cause prices to rise in short term.

6. The most important part of the Turkish inflation targeting framework is the transparency that must be provided by the monetary authority. Regarding all these

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<sup>42</sup> The identification of underlying inflation for Turkey has to be established. The sensitivity of CPI to economic and policy variables has to be tested as well. In order to do that, granger causality tests and impulse responses and a multivariate model of CPI inflation can be used.

<sup>43</sup> Prices tend to be highly volatile in short terms but are generally thought to be fluctuating around the mean in long run.

problems mentioned above, the performance of inflation targeting is more related to the level of transparency and hence credibility of the policies than it would be for other countries. Since the market is very vulnerable in Turkey, authorities should be very sensitive to reactions of public. In order to maintain the credibility of inflation targeting, Central Bank must commit to the target and must never deviate from it. The policy changes must be announced to public periodically and inflation report should be published.

7. Inflation forecast may be performed during the implementation period. These forecast could successfully guide monetary authority for prospective and necessary changes in the implementation of inflation targeting and signal departures from the target. However inflation biases and hence large inflation forecast errors may cause substantial uncertainties in inflation targeting. To relieve this problem, monetary authority should use every information in its projections. Different forecasting techniques, in shorter and longer terms, should be employed and checked for their accuracy level. Models used for forecasting should be open to new developments and information. The decision of which forecast will be taken as an intermediate target must be taken after complete reliability testing of forecasting techniques performed.

## **7. Conclusion**

In sum, this paper suggests that inflation targeting framework may be a good remedy for countries where deep recessions or high inflation occupies the economy. The recent situation of Japanese economy poses very unique features, and perhaps reminds

some historical political mistakes, and Japan always overcame any difficulties in her past, but, this time, it seems that pursuing a new framework that will assist the economy to regain its confidence is inevitable. As far as risk averse nature of Japanese community concerned, inflation targeting may provide sufficient commitment and enthusiasm to get out of ongoing slump. Not only do distinct features of inflation targeting lead to this conclusion but previous experiences of inflation targeting countries also express the targeting preference of adequate monetary policy. A declared comparative advantage of inflation targeting is to be assessed in the case of Turkey as well. Yet Turkish economy needs a successful disinflation period before enjoying satisfactory consequences of inflation targeting fully. Thorough implementations of inflation targeting framework in both countries however beg for further researches to specify merit of inflation targeting more in detail.

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