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Considering Responses following a Financial Crisis: A Thought Experiment

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- Rapid responses to avoid a banking crisis in the event of a precipitous increase in government bond interest rates
- Active involvement by the Bank of Japan will be important in saving financial institutions
- The key to success will be the independence and fiscal soundness of the Bank of Japan

1. Projecting post-collapse scenarios

The fact that Japan is the world's largest debtor nation is widely known not only in Japan but throughout the world. Most scholars that I meet at international conferences are surprised at the political logic that has seen the nation's borrowing increase to 190% of GDP, but eventually abandon any attempt to understand the situation in the face of the continuing decline in government bond interest rates, shaking their heads at the strangeness of the country.

However, we must not give up our attempt to understand. We must learn the answers to two questions. First, will Japan experience a fiscal collapse? And second, if it does, what will happen? These two questions are rarely discussed together. It is regarded as taboo. Naturally, such discussions have a variety of effects and it is therefore felt necessary to leave some factors out of consideration. However, understanding the facts is more important than that.

In this paper, I would like to focus on the second question. While the first question has recently come to be discussed informally, there is almost no discussion of the second. Given that clearly stating the possibility of a collapse is taboo, public discussion stops short of the question as to what the government would do in the event of such a collapse.

This taboo originates in the fact that discussion of collapse fuels fears of collapse, and it is essential not to incite the type of concern that triggers runs on banks in relation to Japanese government bonds. It is inherently impossible to predict whether a collapse will actually occur or not. Given that the occurrence or non-occurrence of a collapse is dependent upon future Japanese government policies, reaching any definitive conclusion would be rather odd in itself.

This paper will therefore not discuss whether or not Japan will experience a financial collapse, but will consider, as a simple thought experiment, what will happen to the Japanese economy in the event of a collapse that in reality perhaps will not occur. Assuming that in reality the efforts of the Japanese government will avert the risk of collapse, I will consider the types of phenomena that might arise if the government repeats a variety of mistakes in future and a collapse does occur

2. History of past financial collapses around the globe

In thinking about things of which we have no previous experience, it is important to learn from history. There was a great deal of discussion concerning financial crisis in the wake of the Lehman Brothers shock, and there was considerable discussion of the collapse of states, centering on the IMF and the World Bank, following the 2001 Argentine crisis. At that time, the need for a bankruptcy law for states was discussed. The significance of the existence of the IMF was also questioned, given that it had been unable to avert the crisis, and reforms in the institution were pushed ahead under the dual impetus of external pressure and internal discussion.

The Harvard economist Kenneth Rogoff, who has been at the forefront of these discussions since that time, also publishes the results of intensive research. Recently, Rogoff published an overview of financial collapses and the situation following those collapses around the world since 1500. Against the background of a shift in global concern from the Lehman Brothers shock to the Greek crisis, this publication sought to objectively analyze past collapses. One of the central purposes of this analysis was to answer the question as to why so many countries experienced repeated collapses. From another perspective, given the fact that some countries had experienced one collapse but not a second, Rogoff sought to understand what was different about such countries. The issue is one of “graduation.”

A country is regarded as having “graduated” if it does not experience a second crisis for a period of twenty years following the occurrence of a previous crisis. However, graduation is difficult for most countries. Just as the probability of collapse is clearly lower in countries with a high economic level, the probability of graduation is higher for these countries. Rogoff also identifies various patterns of collapse. These can broadly be divided into collapses of public finances, collapses due to inflation, and banking crises. These three types of collapse are not mutually independent, and may occur at the same time. And what is more important is that in many cases when a country has overcome or graduated from one type of collapse, it will then experience another. Facing the danger of one type of collapse, a country takes measures to remove this danger, which introduces strain at another point.

The classical example is inducing inflation in order to avoid fiscal collapse. Hyperinflation is not necessary; even a rate of just under 20% will reduce debt considerably if it continues for several years. If we think of this as a transition from a financial crisis to an inflation crisis, we see that examples are increasing even among advanced nations.

3. Financial crisis in Japan as an anomalous phenomenon

What does this history of collapses suggest for financial collapse in contemporary Japan?

Japan experienced financial collapse in the Second World War. Following this, the nation also experienced hyperinflation. Prior to this, a number of financial panics occurred, and parity with gold was lowered. The experience of crises in Japan is therefore not historically unusual.

Normal financial crises generally follow a pattern in which a decline in the exchange rate increases the actual amount of foreign debt, fear of financial collapse increases, and it becomes impossible to refinance foreign debt. A rapid increase in expenditure and consequent financial collapse due to war is another pattern.

However, the special feature of Japan’s present financial crisis is that it arose in the absence of severe changes in the external environment or the occurrence of any abnormal states. Debt is increasingly rapidly, despite the fact that the economy has not entered any atypical state. A monetary crisis did not spread to cause financial collapse. In addition, this is not foreign debt, and there is no sign of a decline in the exchange rate. There is normally an impetus to reduce domestic debt by means of inflation, but that is not occurring in this case. The situation is strange, and it is one which obscures our scenarios of financial collapse.

On all fronts, Japan’s financial crisis is an anomaly - we are in unchartered territory. The assertion that a collapse will not occur can therefore be understood as meaning that there will be no collapse conforming to past patterns. On the other hand, it is logically possible that a collapse will occur of a type that has never occurred before.

However, I will not discuss here which of these positions might be correct. I would, rather, like to consider what might happen if a financial collapse occurs following a previously unknown pattern. If an event which has never occurred before in history actually occurs, the shock is likely to plunge society into chaos. It is precisely because of this that I believe that there is some significance in engaging in a thought experiment and considering what might happen, determining measures to enable us to respond to the situation, and implementing certain measures before the event.

4. Simulation of process of actual financial collapse

What form, then, will this historically unprecedented financial collapse take? First, looking at the present situation, rather than witnessing a state of inflation, we find that the rate of increase in prices is negative, and interest rates are almost zero on short-term government bonds and only around 1% on ten-year bonds. This is an important point. It means that there is little possibility that government financing will be impeded, leading to the collapse of public finances. Normally, the government would become unable to refinance its bonds, and would default; in the case of Japan, given that the interest rate is presently 1%, even if bond auctions for refinancing became unworkable, interest rates would not rise to more than 2% or 3%. Assuming an increase to 3%, government financing would not be impeded in the short-term. Even at a rate of new bond issuance of 100 trillion yen a year, a 2% increase in the interest rate only represents a 2 trillion yen increase in the debt servicing burden. Therefore, I do not believe that a financial crisis will come in the form of a government debt default.

Naturally, this is not to say that a financial crisis will not occur. It is merely to indicate that it will not occur as a government default. We cannot allow complacent thinking of the type which follows the logic that a government collapse would represent a physical impediment to financing, and a collapse could not reach this level in modern money markets.

Because private-sector economic actors use current-value accounting, and external evaluations are also conducted at current value, a rapid increase in bond interest rates would mean a rapid decline in the current value of the bonds. This would represent a predicament for economic entities holding large quantities of Japanese government bonds.

In Japan, the main holders of government bonds are banks, life insurance companies, pension funds, postal savings funds, postal life insurance funds, and public pension funds. If there was a significant drop in the price of Japanese government bonds, private sector financial institutions, in particular banks, would face a difficult situation. Estimating the level of damage in the banking sector as a whole, for bond holdings of 120 trillion yen, we get a figure of about 10 trillion yen, even if we extend the current maturity to an average of five years and assume an increase in the interest rate from 1% to 3%.

This is a large figure, but if we consider that it is spread across Japan as a whole, then we can predict that the shock would be absorbed somehow. However, there is a possibility that there would be a significant drop in the stock prices of listed banks, and that it would become impossible for them to secure funds in the call market, and it can be predicted that this would lead to a return of the Japan premium. In other words, a scenario can be projected in which the effect on the banks would not be limited to the direct effect of the appraisal loss on their bond holdings, and the banking crisis would become a financial crisis.

However, if we assume that the Bank of Japan is still sound when this happens, we may consider that a variety of measures could be implemented, including supplying funds to the call market, or providing direct loans to financial institutions. Put another way, even if confidence in Japanese government bonds is shaken and this is reflected in prices, as long as confidence in the Bank of Japan does not waver, there is a possibility that it could respond flexibly to a financial crisis with a certain degree of independence.

Life insurance companies and pension funds would also suffer appraisal losses on their bond holdings, but we may assume that the knock-on effects would be felt over a longer period than would be the case for banks. Therefore, in the event of a rapid increase in interest rates for government bonds, responding to the banking crisis should be considered the highest priority. Similarly, postal savings funds and Kampo Funds would suffer significant appraisal losses, and the effect would be significant if they were not sufficiently prepared with hedge funds, duration management, etc., but it could be predicted that they would ride out the crisis in the short-term without using the current value method.

However, the effects on the economy would differ significantly depending on whether or not the effect of spiraling interest rates was limited to the interest on government bonds. Normally, the interest rates for government bonds form the basis for the interest rates for corporate bonds, and provide a benchmark for pricing financial products. In addition, because they form the basic interest rates for long-term loans, etc., they have an effect on interest rate levels throughout the entire economy. Because of this, a rapid increase in interest rates for government bonds would result in a decline in the price of all bonds and an increase in interest rates for loans, causing chaos, price declines and weakening in both the financial markets and the real economy.

This is generally thought to be quite natural. But Japan’s present situation differs greatly from the standard examples provided by other countries, as indicated by the fact that an increase in government bond interest rates would not necessarily be linked to a fall in the yen (Normally, a decline in the price of government bonds equates to a drop in the value of the currency). In Japan’s case, the interest rates will not be brought down by the sale of the bonds by foreign investors in overseas markets, and additionally, the decline in the price of the bonds will not result in their dumping by foreign investors. Therefore, even if there is an increase in the interest rates for Japanese government bonds, it will not necessarily be the case that the interest rates for corporate bonds will increase in tandem. Assuming that government bonds are the only domestic bonds abandoned by domestic investors, it is possible that government bonds would be the only bonds to experience a collapse in value, and that the interest rates for corporate bonds issued by individual companies would become lower than the interest rates for government bonds.

Therefore, if the Bank of Japan was to maintain its independence from the government, support buying of financial products in the money market in order to enable the procurement of funds by private companies, rather than support buying of government bonds, would be quite feasible, and beneficial to the Japanese economy.

To sum up the above, in the event that fears of a collapse in Japan’s public finances were to cause a rapid rise in the interest rates for government bonds, management of the money supply by the government would not necessarily be immediately impeded, nor would we enter a situation of hyperinflation. The economy would stagnate, but it would be possible for private corporations to maintain their economic activities without any deepening of the financial crisis. Under these circumstances, the important factors would be the central bank's independence from the government and fiscal soundness. It would be beneficial for the economy for the BOJ to implement policies which would prevent the effect of the collapse of government finances from impacting on the economy as a whole, functioning as if it were conducting bankruptcy proceedings for the government, and to construct mechanisms in the economy in advance which would make this possible

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