Why aren’t bond yields and inflation responding to Japanese fiscal risks?

Tomoyuki Nakajima*

Kyoto University and CIGS

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*Email: nakajima@kier.kyoto-u.ac.jp. This talk is based on Braun and Nakajima (2012) “Why prices don’t respond sooner to a prospective sovereign debt crisis.”
Summary of the talk

- If the risk of a fiscal crisis goes up, the inflation rate and/or government bond yields will rise.
  - 10-year govt bond yields on May 30, 2012:
    - 1.32% in Germany, 5.98% in Italy, and 6.67% in Spain.

- Government bond yields and the inflation rate are very low in Japan.
  - 10-year govt bond yields = 0.86%, and inflation rate is negative.
  - Does that mean that the risk of a fiscal crisis is negligible in Japan?

- Our answer: No!
  - In the presence of financial frictions, there can be a substantial delay in the responses of govt bond yields and inflation to an increase in fiscal risks.
  - Those frictions are important in Japan.
  - Low govt bond yields and deflation are perfectly consistent with the view that the fiscal risk is significant.
Effects of news about a fiscal crisis

- News about a future event affects our current behavior.
  - If weather forecast says it will rain today, you will take an umbrella with you.
- For the same reason, news about the possibility of a fiscal crisis affects the price of sovereign debt today.
How quickly is such news reflected in bond prices and/or inflation?

In the absence of frictions in financial markets, it is immediate.

An example taken from Braun and Nakajima (2012).

We will look at how “holding period returns” respond to news about a crisis.

Holding period returns = one-period returns from holding long-term govt bonds.

Pessimistic news about a crisis tends to reduce govt bond prices and hence their holding period returns.
Prior to year 0, people believe that a sovereign debt crisis never happens. But, starting from year 0, people gradually realize that there will be a debt crisis in year 4.
Financial frictions delay the responses!

With financial frictions, responses are delayed, concentrated, and amplified.
What kind of frictions drive the result?

- It is the **short selling constraint**.
- It creates the following asymmetry among people.
  - Agents who value govt bonds more than others:
    - They *borrow* to purchase govt bonds.
  - Agents who do not value govt bonds as much:
    - They do not hold govt bonds, but lend to those who buy them.
    - These agents are constrained by the **short selling constraint**.
- This asymmetry among agents implies:
  - Govt bond prices are more affected by the views of those who value them more.
  - This creates a delay in the response of their prices to the news about a crisis.
  - As a result, once the crisis occurs, it has a more disastrous effect.
Short-selling constraints are important in Japan

The financial sector holds a dominant fraction of govt debt.

- They **borrow** to purchase govt debt.

Other sectors’ holdings of govt debt are small.

- They **lend** to the financial sector, and yet do **not short sell** govt debt.
Inflation

- So far, we have looked at how govt bond prices respond to news about a fiscal risk.
- Inflation may also be affected by such news.
- This is because inflation is one way to reduce the real amount of govt debt.
  - Many historical episodes where a fiscal crisis is accompanied by a large increase in inflation.
Financial frictions delay responses of inflation

With financial frictions, responses of inflation are delayed, concentrated, and amplified.
Conclusion

Observing low inflation and high govt bond prices does NOT guarantee that the risk of a sovereign debt crisis is low.

- It is perfectly consistent with the view that there is a significant risk of a crisis.

We have shown:

- there is a significant delay in the responses of govt bond prices and inflation to news about a crisis;
- the responses of govt bond prices and inflation are concentrated during the crisis event;
- once the crisis occurs, its effect becomes much more disastrous.
Our argument is based on financial frictions which imply:

- some agents borrow to purchase govt debt;
- others do not hold it, but is restricted from short selling it, and lend to those who purchase govt debt.

This matches well with the evidence in Japan, where a majority of govt debt is held by financial institutions.
Where is Japan now?

![Graph showing bond yields and inflation response to Japanese fiscal risks. The graph compares German 3yr and Greek 3yr yields from 2001-2012. The yields are plotted on the y-axis, and the years on the x-axis. The graph highlights the significant rise in Greek 3yr yields starting from 2010-2011, while German yields remain relatively stable.](image-url)