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

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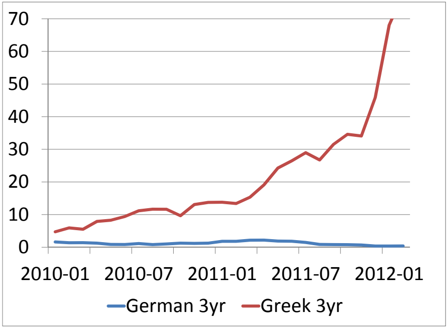
Summary of the talk

- 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

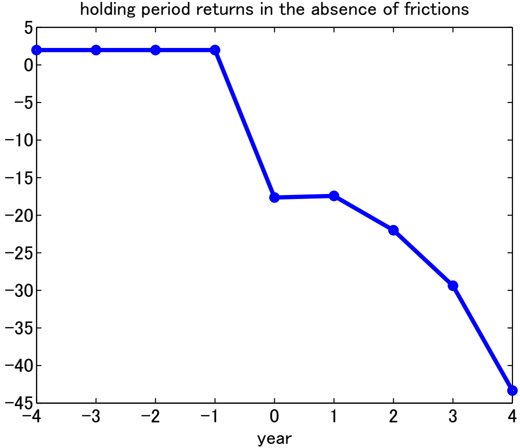
- News about a future event affects our current behavior.
  - If weather forecast says it will rain today, you will take an umbrella with you.
- For the same reason, news about the possibility of a fiscal crisis affects the price of sovereign debt today.



Effects of news about a future crisis

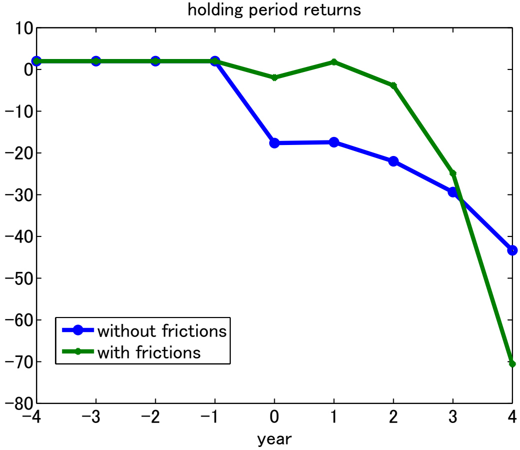
- How quickly is such news reflected in bond prices and/or inflation?
  - In the absence of frictions in financial markets, it is immediate.
- An example taken from Braun and Nakajima (2012).
  - We will look at how "holding period returns" respond to news about a crisis.
    - Holding period returns = 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.

Responses are immediate without frictions



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

Holdings of Japanese Government Debt
End of fiscal year 2008

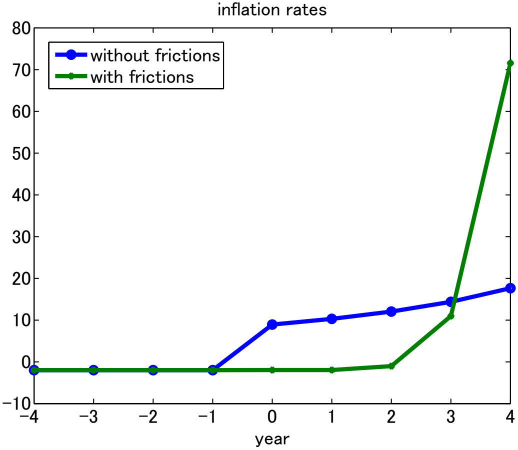
	Amount (trillion yen)	Fraction (%, net of govt)
Total	936.63	
Government	114.04	
Individuals and non-financial companies	75.88	9.2
Domestic Financial Institutions	687.45	83.6
Private	354.27	43.1
Public	268.06	32.6
Central Bank	65.12	7.9
Foreign sector	59.26	7.2

- 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.

Conclusion

- 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?