

# RIETI BBL Seminar Handout

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“Japanese Current Account:  
Post-Tohoku Earthquake”

March 17, 2014

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<http://www.rieti.go.jp/jp/index.html>

# Japanese Current Account: Post-Tohoku Earthquake

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# Main Points

- Japanese Current Account started to deteriorate before the Tohoku Earthquake, after the Lehman Crisis.

Decline in Current Account Accelerated after Tohoku, owing to rapid increases in mineral imports, especially that of natural gas imports.

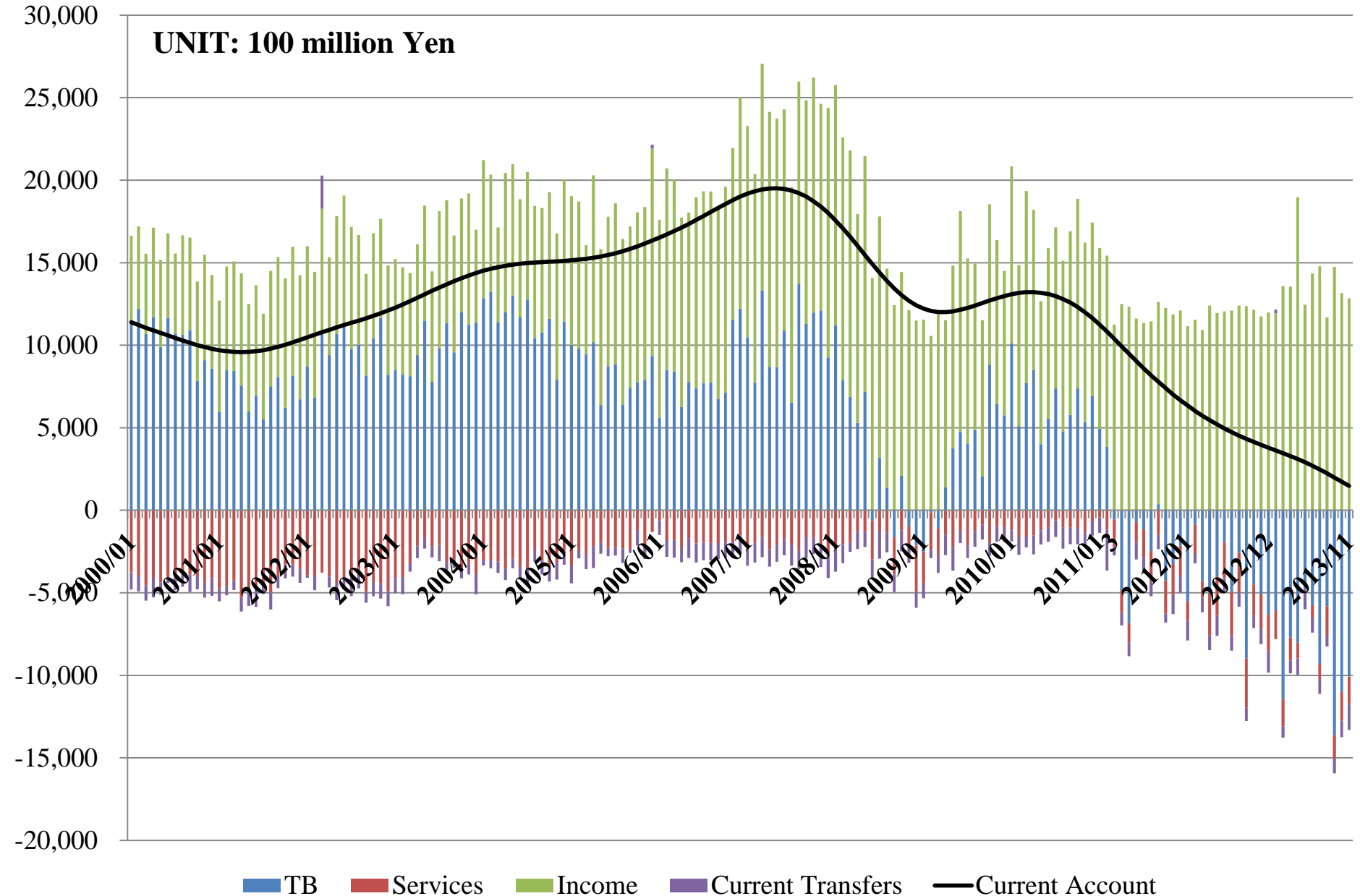
# Main Points

- Over the medium-term, Japanese total saving rates have been declining, and will continue to decline as the population ages and as government deficits remain, Japan's current account should worsen.

My model shows that the current yen-dollar exchange rate is appropriately, or still slightly overvalued. The yen can get weaker.

# The Japanese Current Account

UNIT: 100 million Yen



# Components of Current Account

The current account started to decline from mid-2007.

Main cause, a plummeting to zero of the merchandise trade balance.

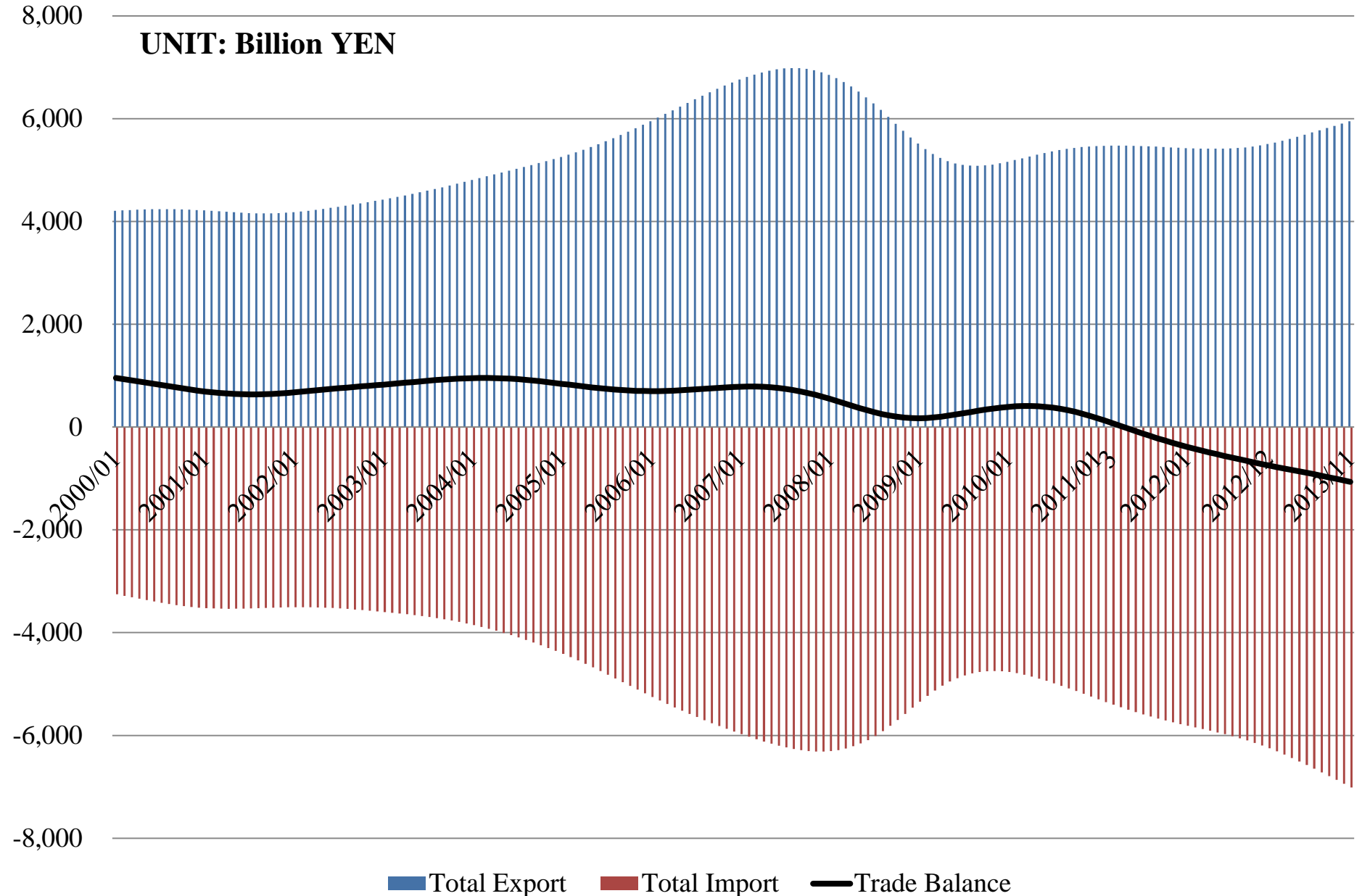
Another sharp decline in the current account starting in March 2011, as the merchandise trade balance turned sharply negative after the Earthquake.

Income inflows (from past accumulation of international net wealth) has actually increased since the earthquake.

In Japan, the current account in services (financial services, consulting, etc.) has always been in deficit and is still in deficit, nothing new here.

# Merchandise Trade Balances

**UNIT: Billion YEN**





# Merchandise Trade Balance: Post-Lehman—Pre-Earthquake

Total merchandise exports started to decline from late 2007, while total merchandise imports remained high, contributing to the decline in the merchandise trade surplus (collapse in world demand).

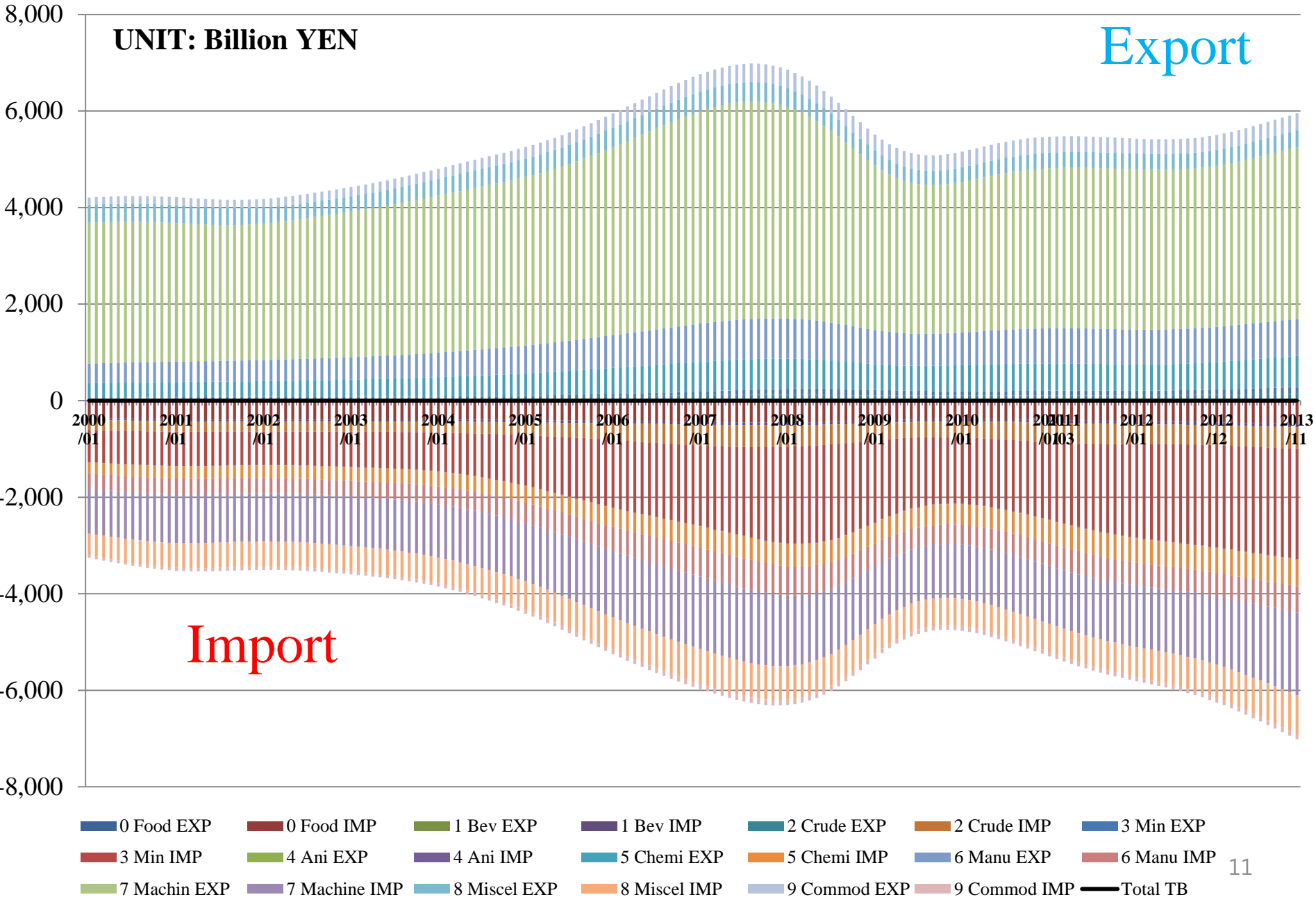
Then, total merchandise imports started to fall, stabilizing the trade balance until the Earthquake in 2011.

# Post-Earthquake Trade Balances

Since the Earthquake, merchandise exports remained stable. In fact, merchandise exports increased slightly in 2012.

Merchandise imports, however, surged, contributing to the sharp deterioration in the merchandise trade balance and the current account.

# Merchandise Trade by Commodity



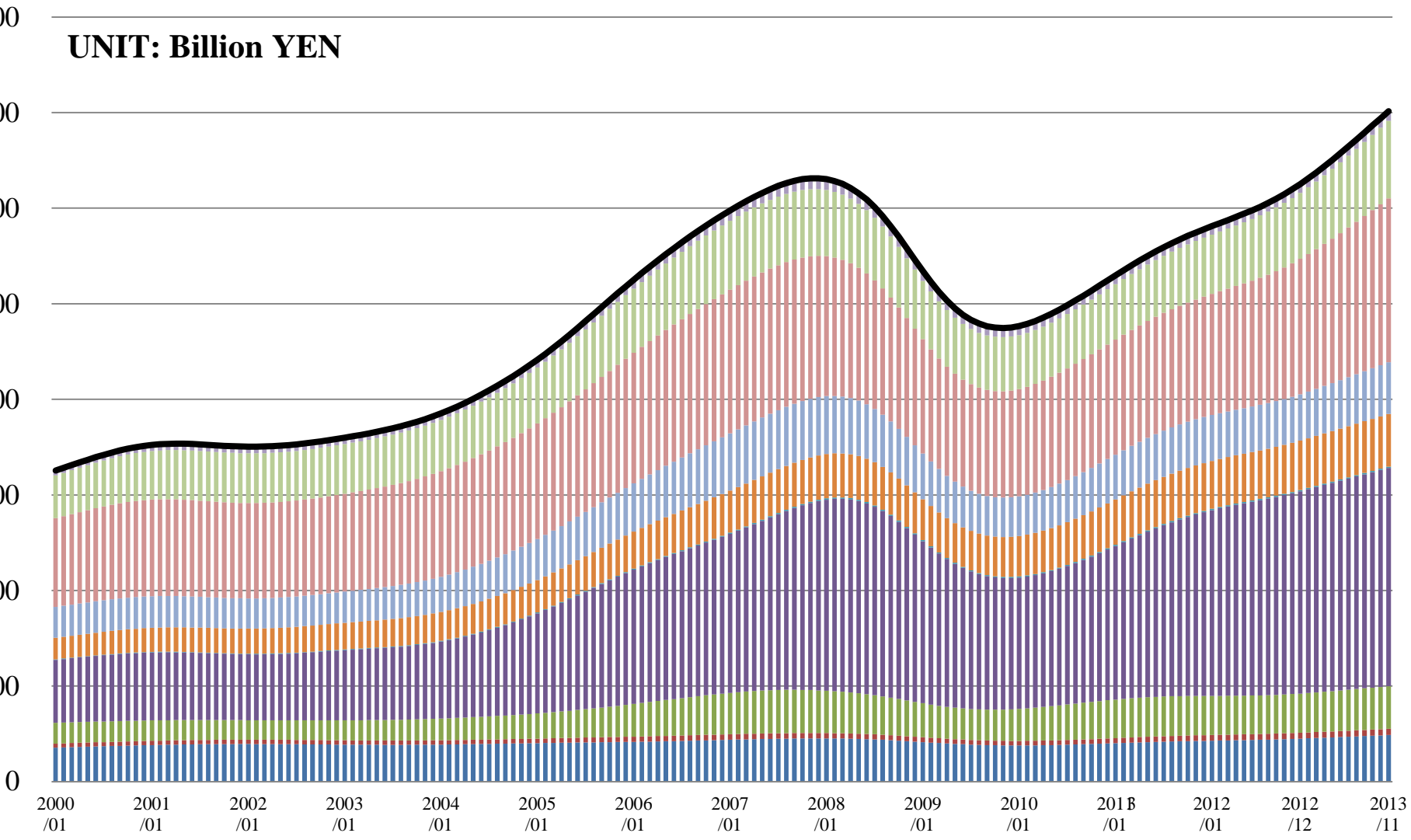
# Post-Earthquake Trade Balances By Commodity

In exports, most commodities remained constant. In fact, machinery exports increased slightly.

In imports, mineral imports increased especially sharply while machinery imports also increased somewhat.

# Merchandise Imports by Commodity

**UNIT: Billion YEN**



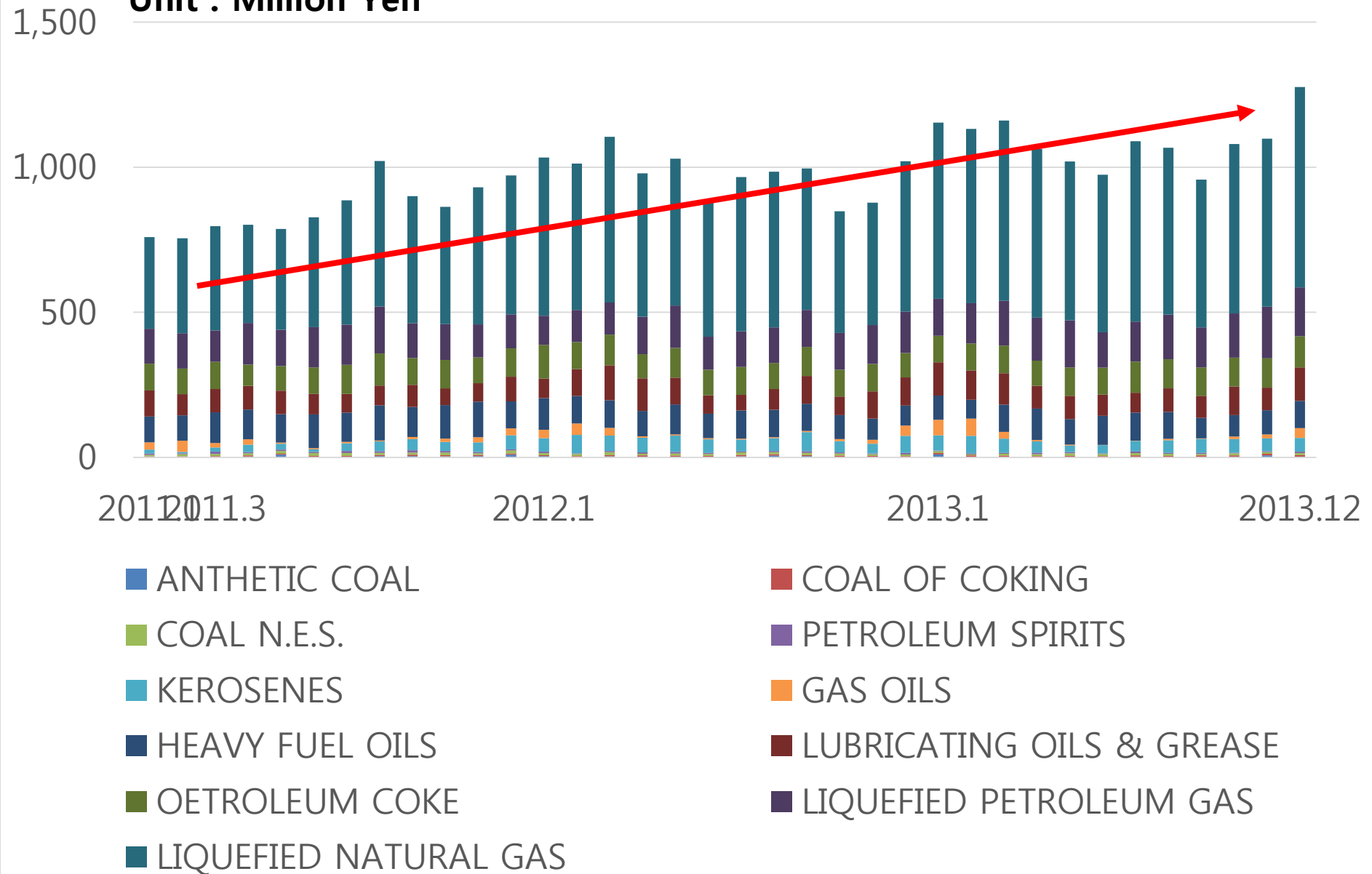
- |  |   |  |
|--|---|--|
| <span style="color: blue;">■</span> 0 FOOD AND LIVE ANIMALS      | <span style="color: red;">■</span> 1 BEVERAGES AND TOBACCO        | <span style="color: green;">■</span> 2 CRUDE MATERIALS, INEDIBLE   |
| <span style="color: purple;">■</span> 3 MINERAL FUELS            | <span style="color: teal;">■</span> 4 ANIMAL & VEGETABLE OIL, FAT | <span style="color: orange;">■</span> 5 CHEMICALS                  |
| <span style="color: lightblue;">■</span> 6 MANUFACTURED GOODS    | <span style="color: pink;">■</span> 7 MACHINERY, TRANSPORT EQUIP. | <span style="color: lightgreen;">■</span> 8 MISCELLANEOUS ARTICLES |
| <span style="color: grey;">■</span> 9 COMMODITIES NOT CLASSIFIED | <span style="color: black;">—</span> Total import                 |  |

# Still More Disaggregated View

Focusing just on merchandise imports, we can see that the surge in imports is largely due to the surge in mineral imports and somewhat due to the increase in machinery imports.

# Import of Minerals (by narrow categories)

Unit : Million Yen



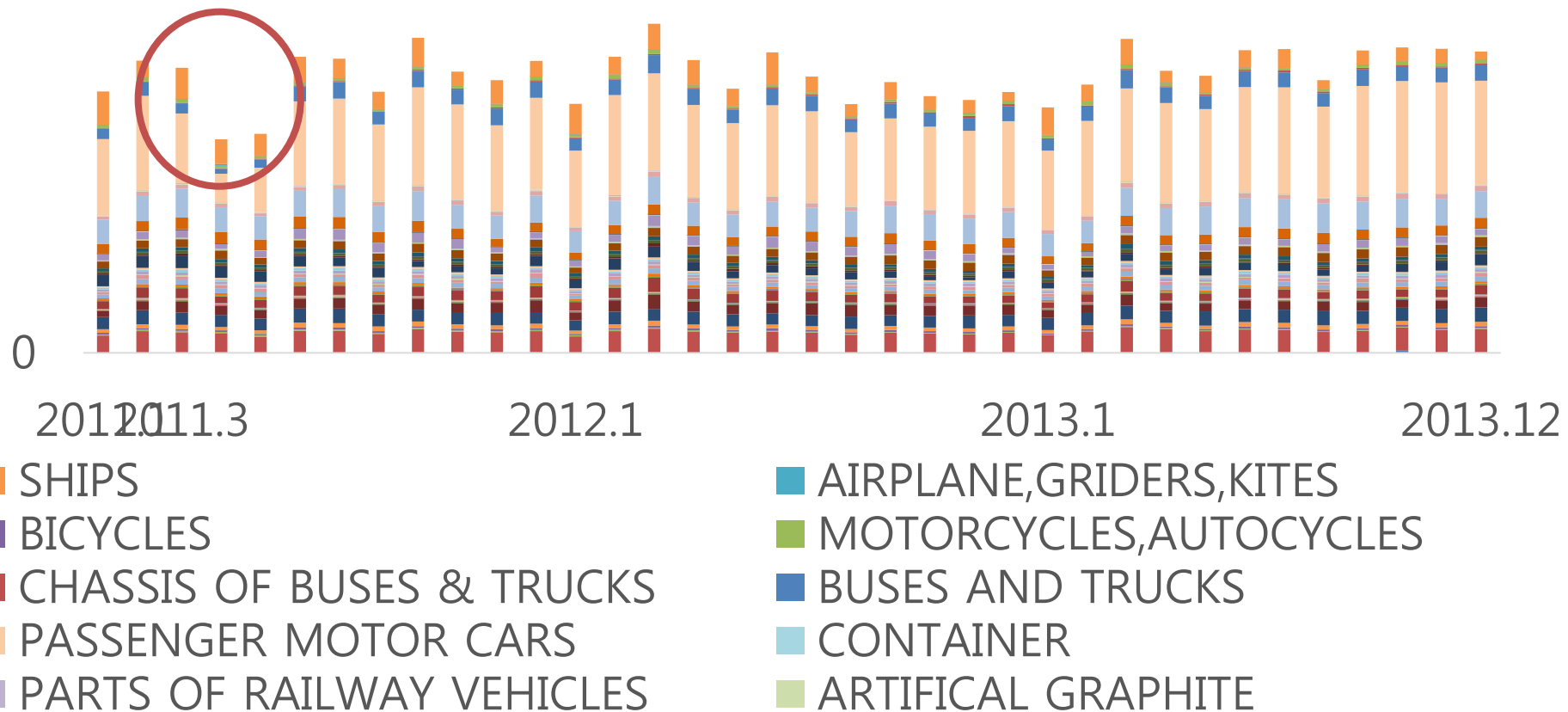
With regards to narrow  
merchandise  
import categories, imports of  
liquified natural gas increased  
throughout.



# EXPORTS OF MACHINERY, TRANSPORT EQUIPMENT (by Category)

5,000

## EQUIPMENT (by Category)



Exports: Decline in  
Passenger Motor Cars Had Big  
Impact Initially, although  
Motor Cars Exports Recovered  
Quickly

# Saving-Investment Approach

While the proximate cause of the deterioration of the Japanese current account is the surge in mineral oil imports, owing to the fall in energy production because of the shutdown of nuclear power plants, the current account deterioration should also show up in a smaller saving-investment gap.

Macroeconomists—as opposed to trade economists--are more familiar at looking at the Current Account from the Saving-Investment Identity:

$$CAS = TS - TI = S(\text{private}) + S(\text{public}) - I(\text{private}) - I(\text{public}).$$

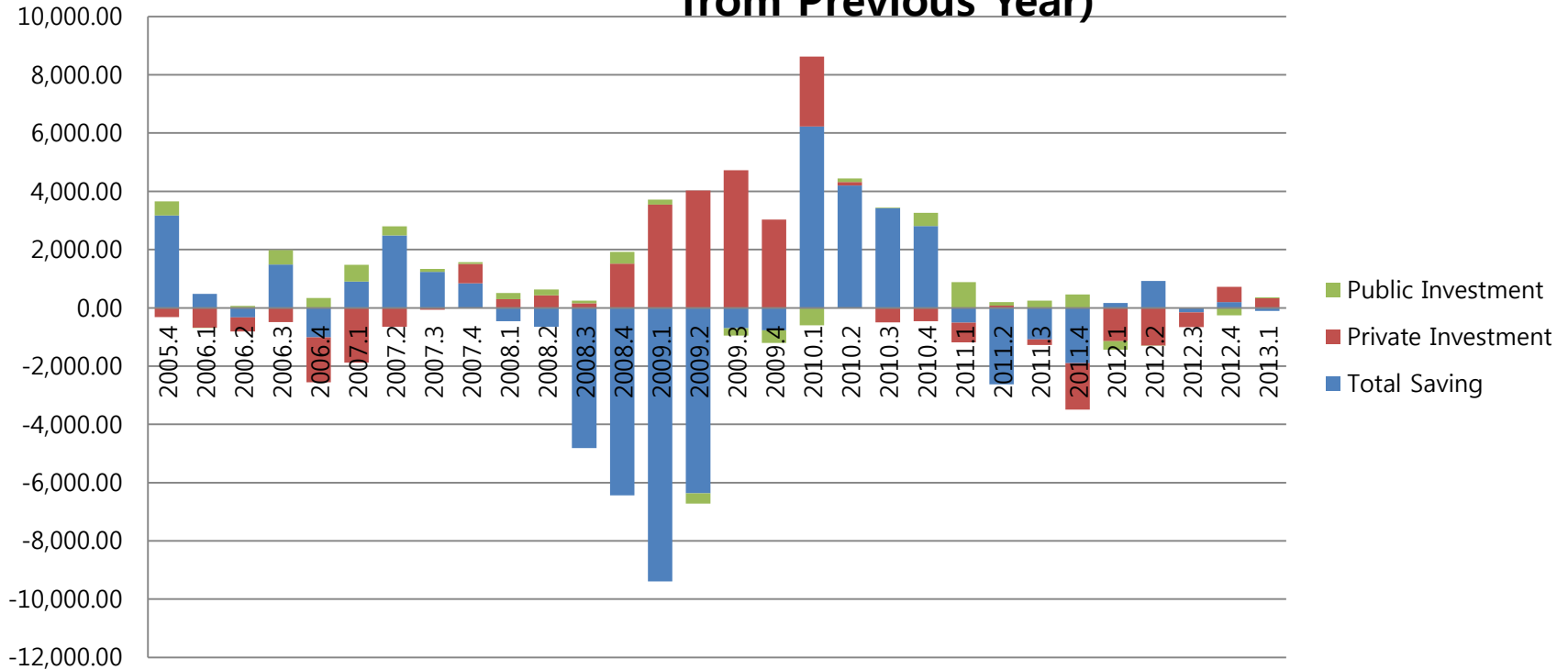
The deterioration in the current account should show up as either a fall in saving or a rise in investment.

Next graph shows the quarterly changes in the Japanese Current Account since 2005.

Generally, the overall decline in the Current Account since 2008 and beyond is driven by the decline in total saving.

After the earthquake, the fall in saving, and the rise in reconstruction investment both contributed to the decline in the current account.

## Contribution to Changes in the Current Account (Change from Previous Year)

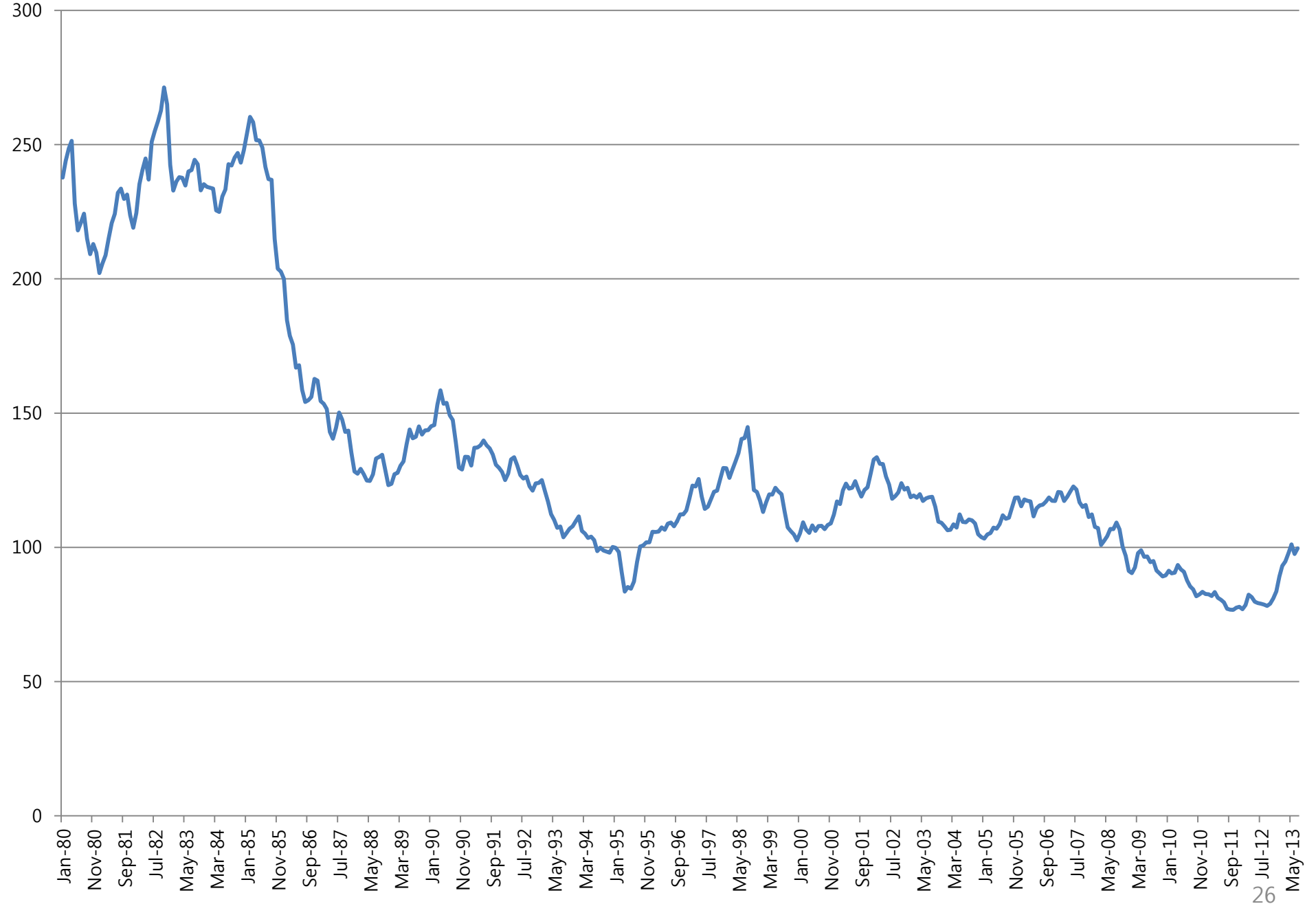




# Exchange Rate Effects on the Current Account

- Actual exchange rates, especially real exchange rates are both determined in the economy, so we cannot say that “changes” in the exchange rate caused changes in the current account. In fact, the current account deficit and the real exchange rate appreciation (since 2007) had simultaneous causes (negative foreign demand shocks).

# (Nominal) Foreign exchange rate



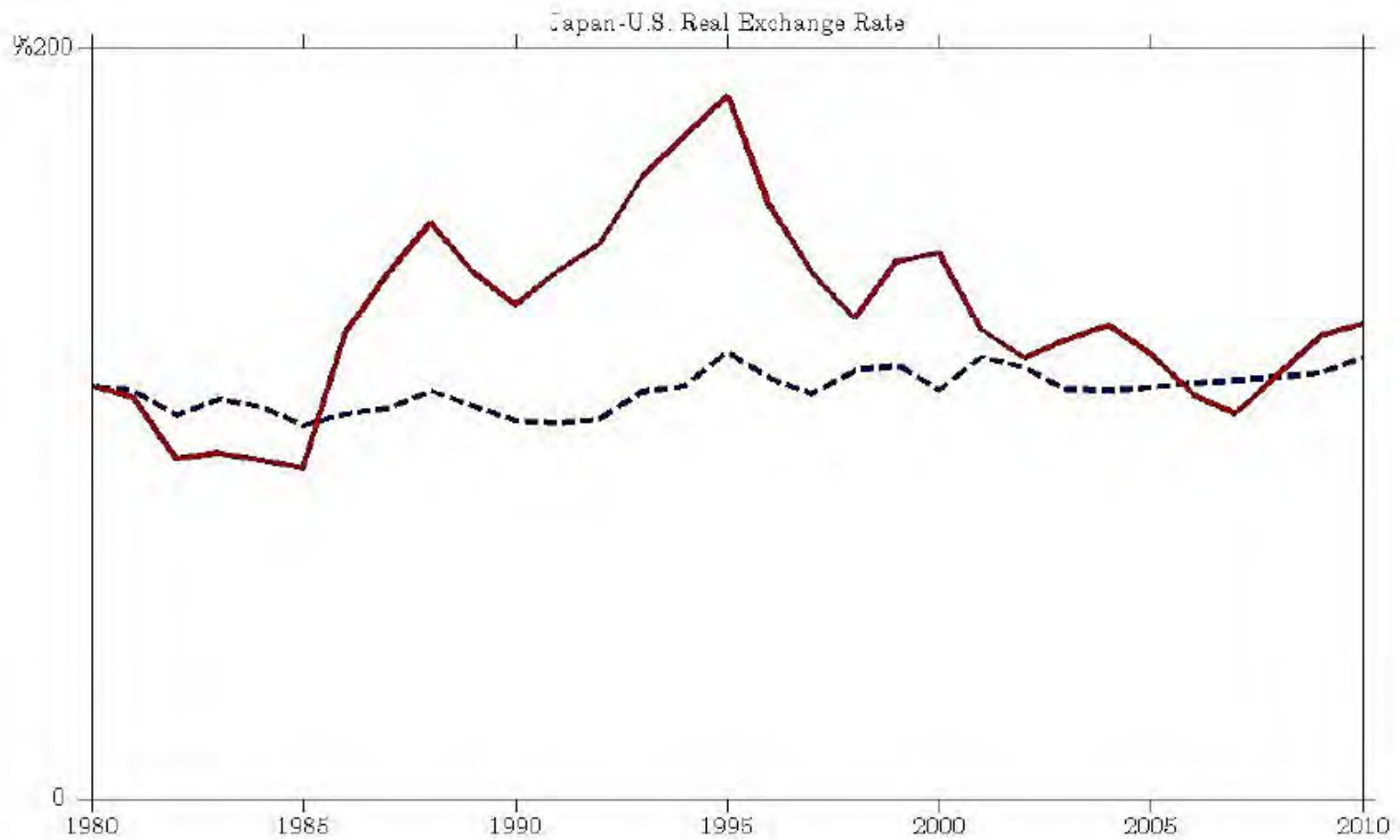
Exchange Rate Effects: the  
Appreciation of the Yen After  
2008, which continued on to 2013  
Coincided with the Deterioration  
in Japan's Current Account

# Real Effective Exchange Rate



Real Effective Exchange Rates:  
This pattern can even be seen in  
the real effective exchange rates.  
Notice the sharp appreciation of  
the yen until mid-2013.

# A Measure of the Equilibrium Real Yen-Dollar Exchange Rate (from Dekle, 2013)



In Real Terms Maybe Yen was Undervalued between 2006 and 2008, and the Overvalued from then on. Yen may be correctly valued or slightly overvalued today. Equilibrium should be 115-120 yen to the Dollar.



Holy Grail—Micro- Macro.  
Integration of the shocks  
to productivity from the  
earthquake with the Saving-  
Investment Balance Approach

Use Approach of Dekle, Kiyotaki, and Jeong (2013). Shocks can result in the change in the trade balance of particular commodities, capital inflows, and the current account balance, through a general equilibrium macroeconomic-trade model

Example: Productivity Shock  
(Earthquake Shock) results in exit  
of low productivity (marginal  
products) from exporting,  
appreciation of real  
exchange rate, and current  
account deterioration

# Projections of the Japanese Current Account

Household Saving will Continue  
to Fall

Corporate Saving will Fluctuate

Government Saving will Fall

# Investment May Stay Flat or Rise ("Olympics" Public and Private Investment)

Many Simulations show that  
Japan will start to run fairly large  
current account deficits by 2020  
(in 5 years)

Would not want to have large  
government debt and large  
current account deficits  
at the same time.

Thank you!