



# Global Financial Crisis and Regional Monetary System in Asia

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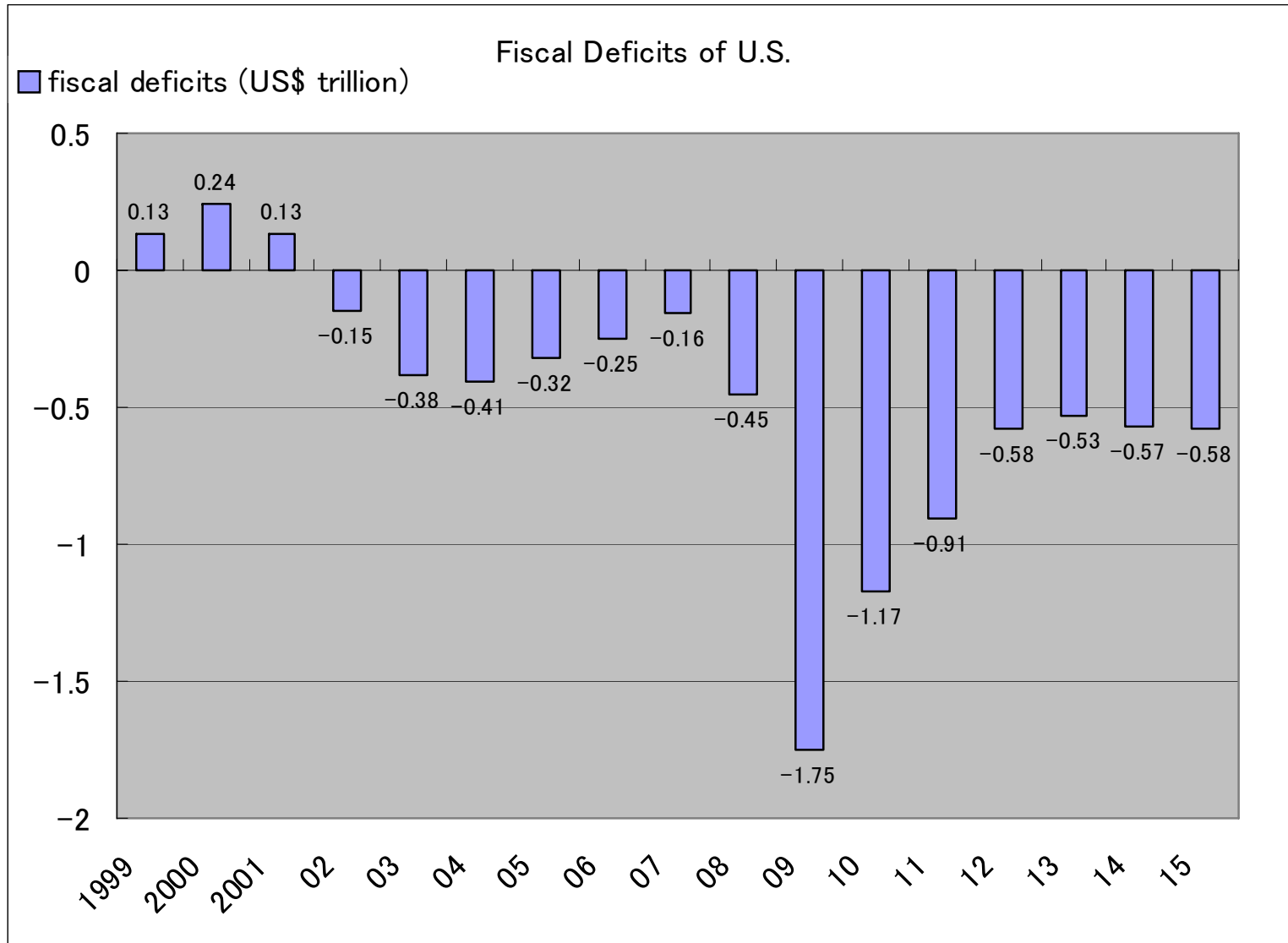
# Scenarios of US dollar depreciation

- **Hard-landing Scenario:** About 20% of appreciation of the JPY and 16% of appreciation of East Asian currencies, given the situation before the global financial crisis and the current fiscal deficit of the U.S.
- **Soft-landing Scenario:** The subprime mortgage problems reduce housing investment, consumption, and investment. The reduction reduces the current account deficits and, in turn, contribute to smaller depreciation of the US\$.
- **Crisis Scenario:** The financial crisis in the U.S. loses credibility of the US\$. It causes a larger depreciation of the US\$.
- **Most Realistic Scenario:** The US\$ keeps at the current level in the short run. Increase in fiscal deficits of the U.S. causes harder-landing in the long run.



# Exchange rate adjustment to CA imbalance

Country/region	Japan		East Asia excluding Japan		East Asia including Japan
	Model J1	Model J2	Model EA1	Model EA2	Model EA3
<b>Responses to 1% appreciation during 50Q</b>					
Appreciation	2.56%	10.48%	18.52%	31.40%	6.79%
Reduced CA surplus	0.23% point	0.73% point	1.53% point	3.61% point	0.87% point
Necessary appreciation during 50Q for 2%point reduced CA surplus	22.3%	28.7%	24.2%	17.4%	15.6%





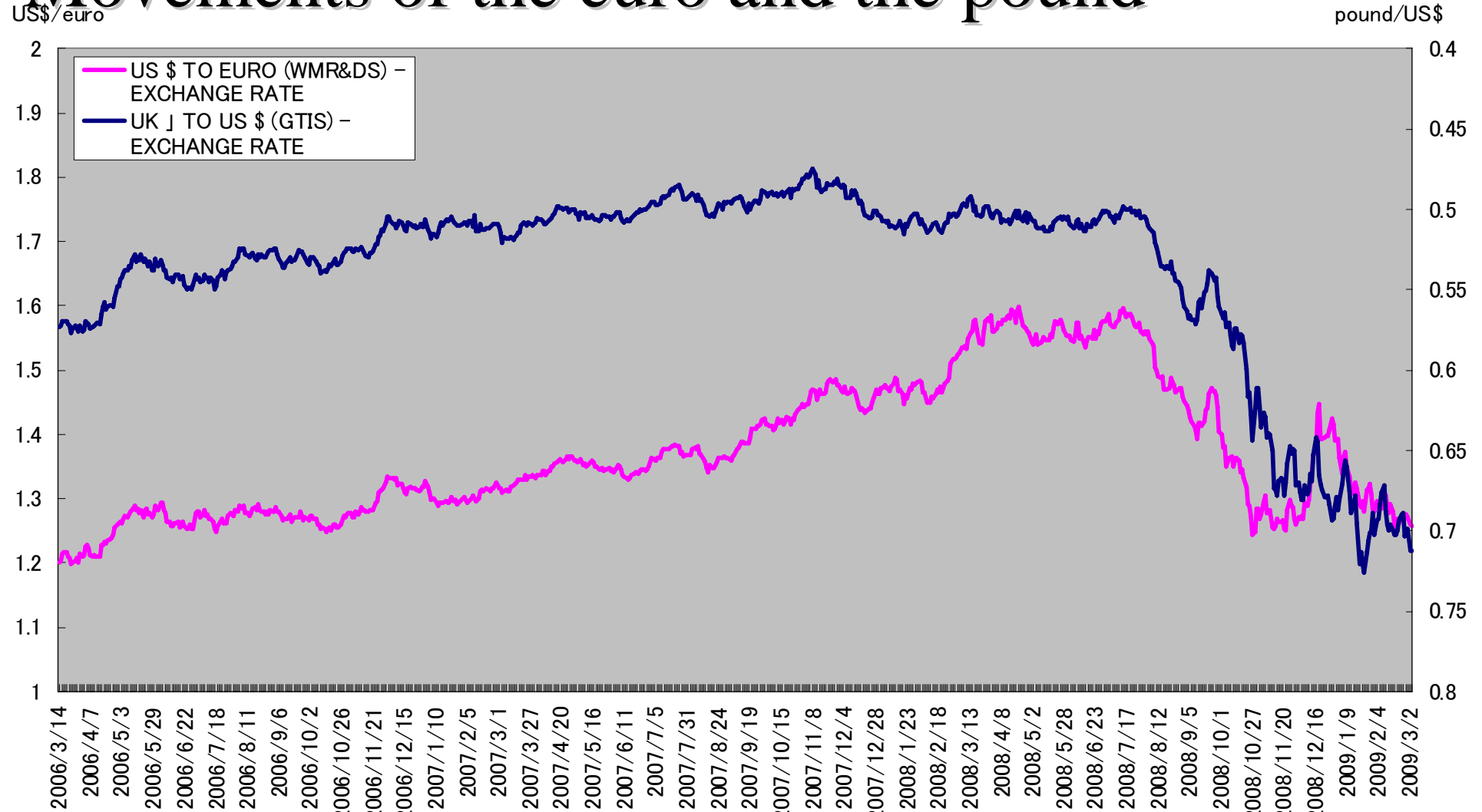
# Moderate appreciation of US dollar and sudden depreciation of euro

- Moderate appreciation of US\$ and sudden depreciation of euro since the Lehman Brothers Shock in September 2008.
- The Lehman Brothers Shock clearly exists counter-party risk in inter-bank markets especially in Europe.
- European financial institutions who damaged their balance sheet due to loss of securities backed by the subprime mortgage cannot finance the US\$ liquidity.
- Some of European countries occurred housing bubbles like the U.S.

=> Lesson: even the euro has depreciated so much even though the euro is used for transactions within the euro area. The US\$ is still used for transactions with outsiders of the euro area.



# Movements of the euro and the pound

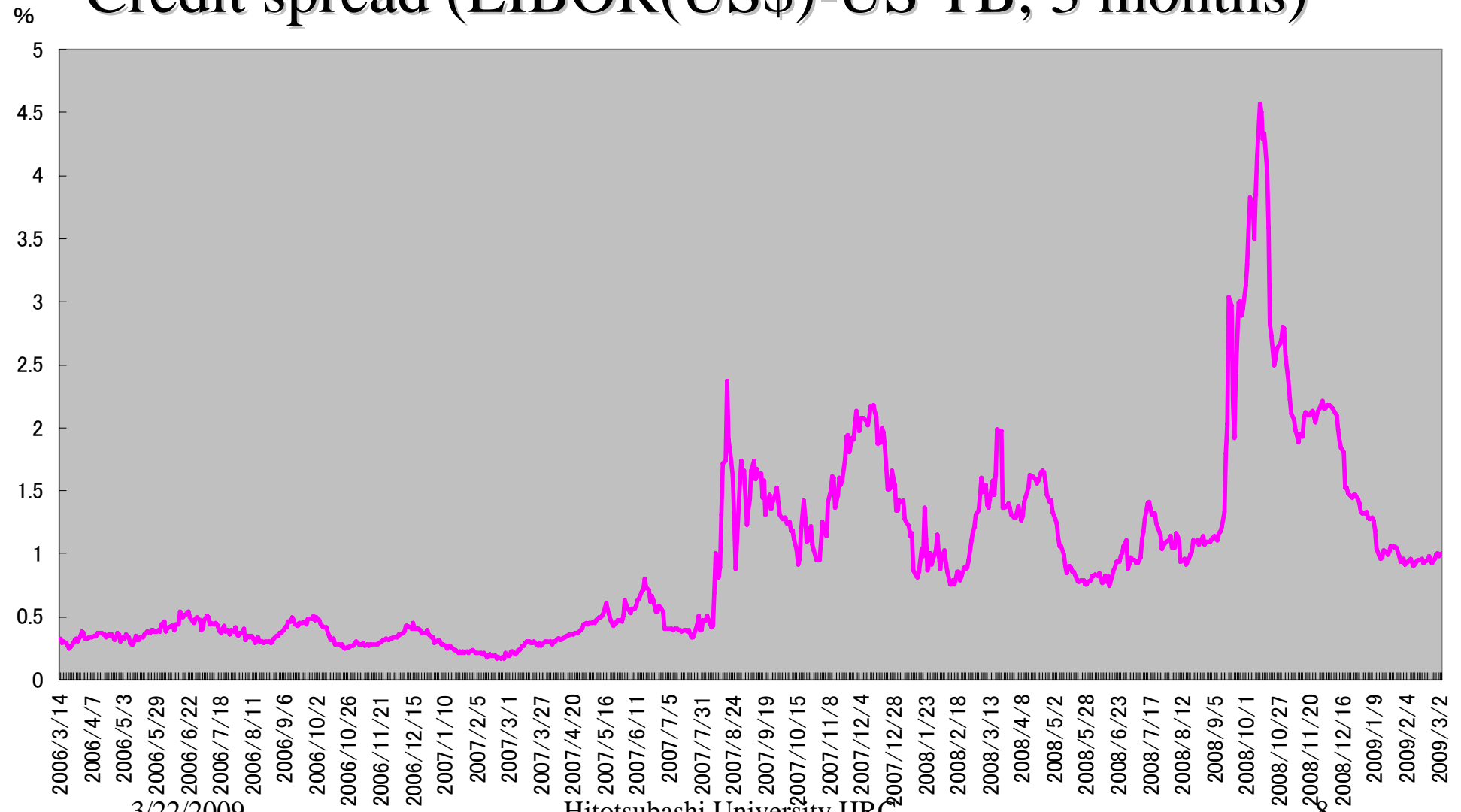


Data: Datastream  
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# Credit spread (LIBOR(US\$)-US TB, 3 months)



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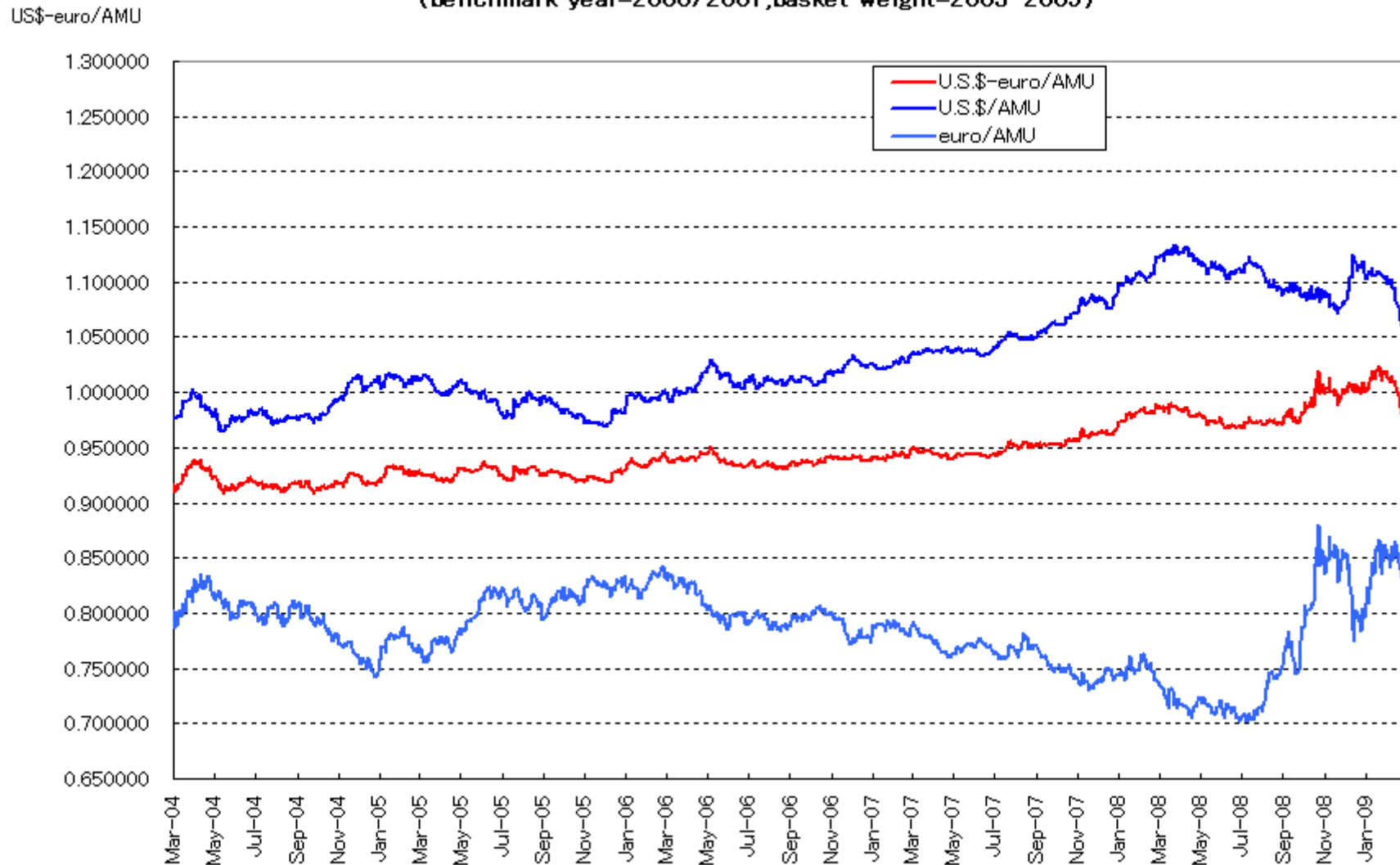
# Reaction of East Asian currencies

- AMU and AMU Deviation Indicators  
(<http://www.rieti.go.jp/users/amu/index.html>)
  - (1) AMU (Asian Monetary Unit): a weighted average of East Asian (ASEAN+3 (China, Japan, and Korea))
  - (2) AMU Deviation Indicators: position of each East Asian currency against the AMU based on benchmark period (2000-2001)
- The AMU has been appreciating against a currency basket of the US\$ and the euro since August 2008.
- The AMU has been depreciating against the US\$ since April 2008.
- The AMU has been appreciating against the euro July 2008.



# Value of AMU in terms of US\$ and euro

Figure 1. AMU in terms of the US\$-euro  
(benchmark year=2000/2001, basket weight=2003-2005)





# Asymmetric reactions of East Asian currencies

- AMU Deviation Indicators of East Asian currencies make asymmetric reactions against the global financial crisis.
- The Korean won changed from 20% of overvaluation in October 2007 to 27% of undervaluation in October 2008. It depreciated by 47% points against the AMU.
- The ASEAN5 currencies have depreciated against the AMU.
- The Japanese yen has a appreciating tendency with volatility against the AMU since August 2007.
- The Chinese yuan has appreciating against the AMU

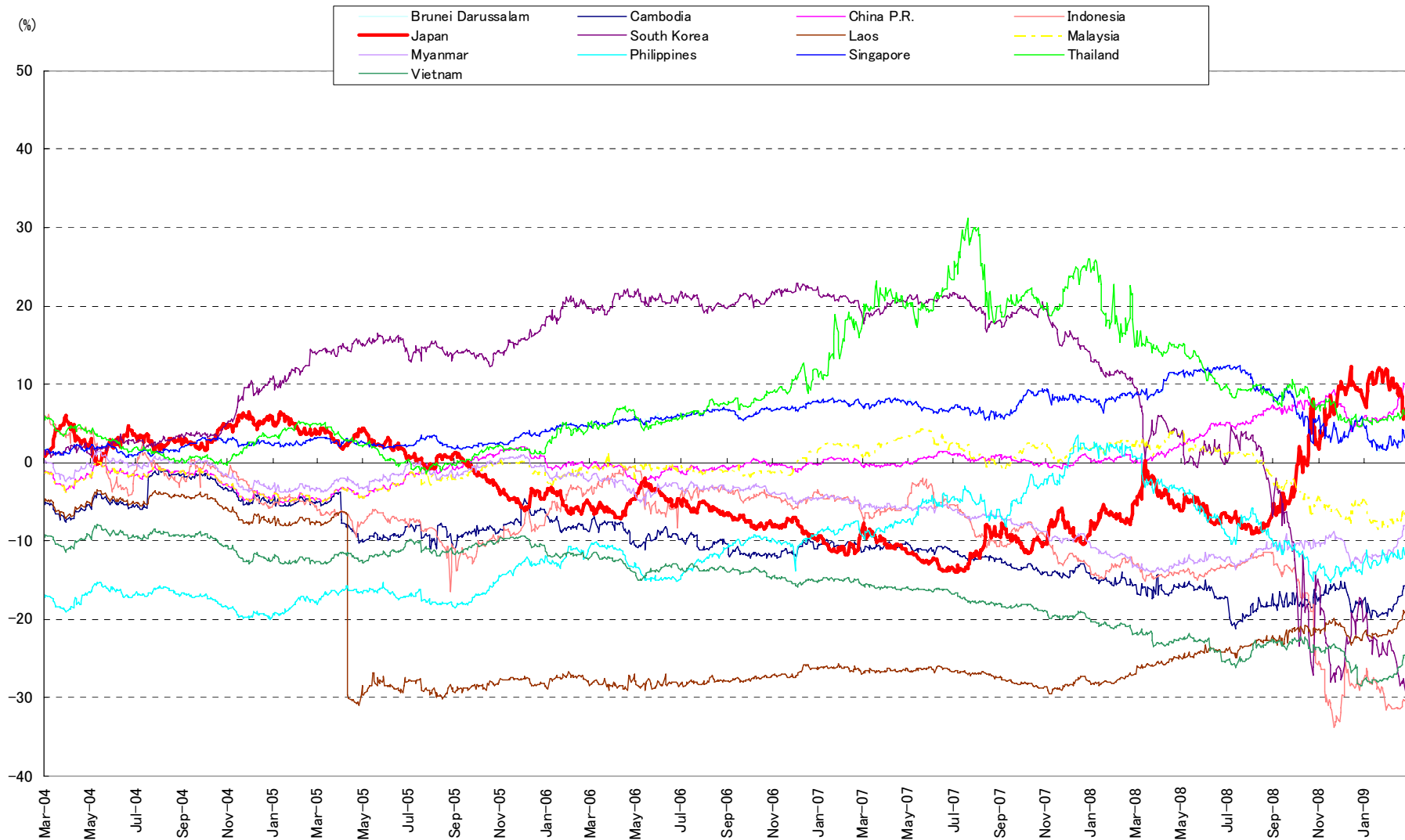
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# Nominal AMU Deviation Indicators

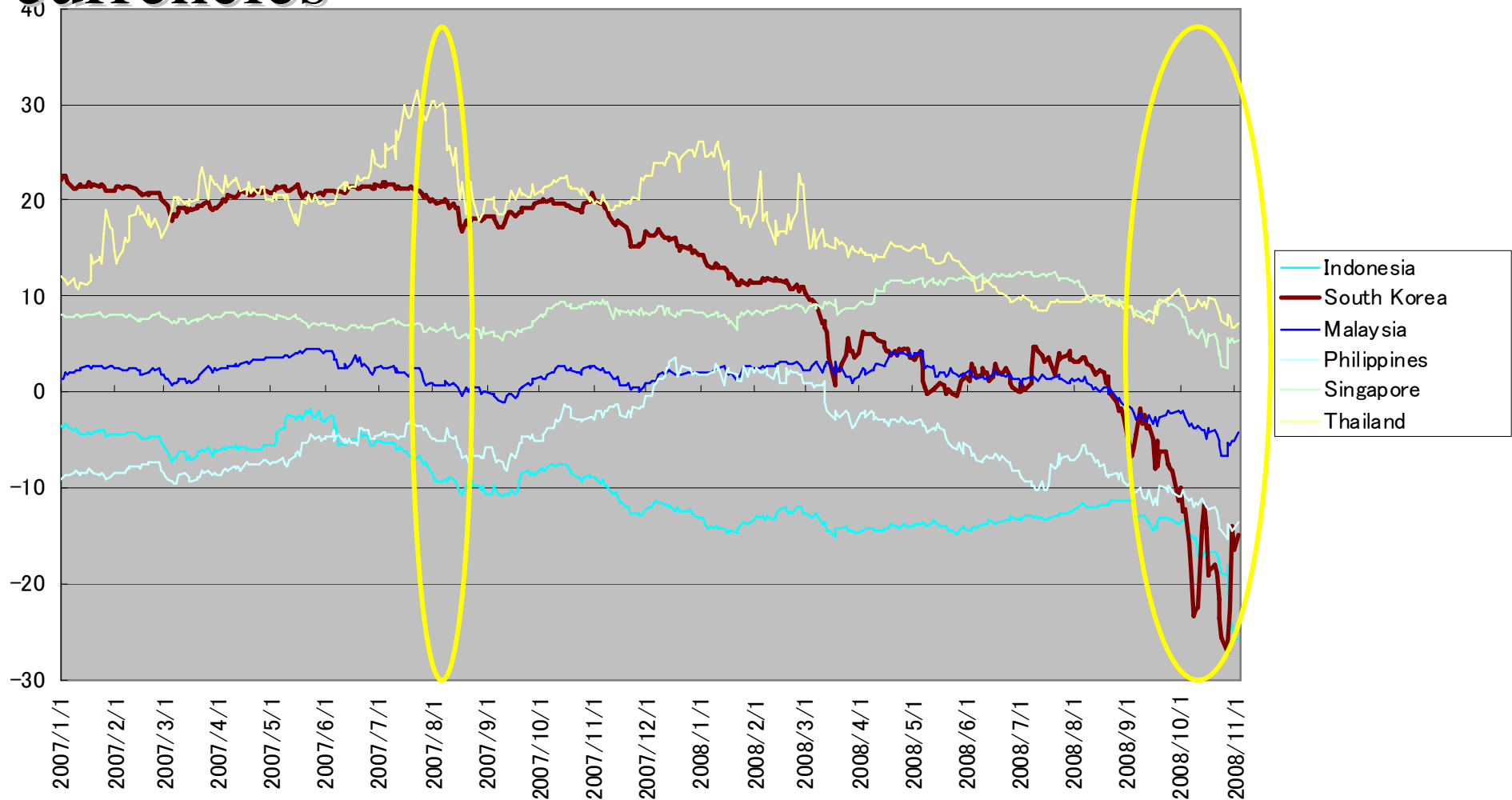
Figure 2. Nominal AMU Deviation Indicators  
(benchmark year=2000/2001,basket weight=2003-2005,daily)





# AMU Deviation Indicators of depreciating currencies

AMU乖離指標(名目)



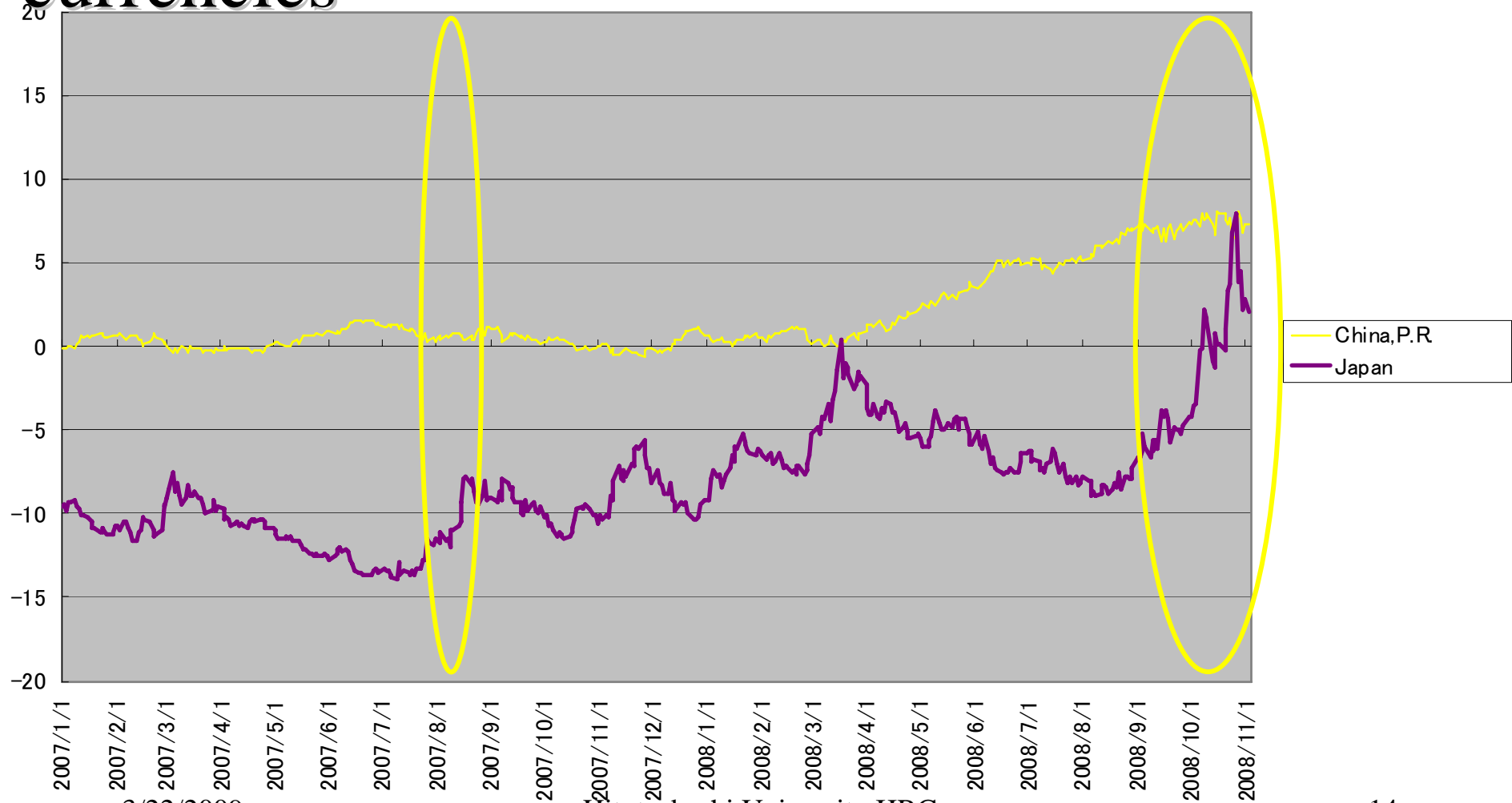
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(データ) <http://www.niet.go.jp/users/amu/index.html>

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# AMU Deviation Indicators of appreciating currencies

AMU乖離指標(名目)



3/22/2009

(データ) <http://www.rieti.go.jp/users/amu/index.html>

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# Limitation of the Chiang Mai Initiative (CMI)

- The CMI includes bilateral currency swap arrangements (CSA) for managing currency crisis and a surveillance process for preventing currency crisis.
- However, the CMI has limitations: (1) A total amount of CSA is US\$ 83 billion. It is not enough! (2) 80 % of the amount is implemented only after the IMF decides to give a financial support to the country (**IMF Link**) for managing balance of payment crisis.
- The Korean government rushed to not the CMI but the FRB to conclude a new CSA and implement it promptly. It shows that the CMI is not effective in implementing for providing US\$ liquidity to Korea.
- Japanese, Chinese, and Korea governments decided to increase CSA between Japan-Korea and China-Korea last December. BOJ and BOK concluded the CSA in terms of the JPY and the won (US\$ 30 billion) without any **IMF Link**.



# Conclusion (1)

- In the short run, shortage of the US dollar liquidity (especially in interbank markets in Europe) is more severe than loss of the US dollar's credibility. It has depreciated the euro against the US\$.
- In the long run, the injection of money to U.S. financial institutions by the U.S. government will be more problematic. It will increase fiscal deficits to 12.3% of GDP in 2009. The increase fiscal deficits should increase the current account deficits of the U.S. and make further depreciation of the US\$.
- The global financial crisis have asymmetric effects on East Asian currencies.





## Conclusion (2)

- We should make effective implementation of the CSA under the CMI in order to provide US\$ liquidity to currency-crisis countries.
- The CMI should be improved by solving the limitations. The CMI should be developed in the following points:
  - (1) Multilateralize the bilateral CSA,
  - (2) Increase total amount of CSA,
  - (3) Reduce a share of IMF Link,
  - (4) Strengthen monitor and surveillance over exchange rates and macroeconomy of East Asian currencies, and
  - (5) Establish standing organization to monitor and surveillance and to provide liquidity to currency crisis countries.



## Conclusion (3)

- In the long run, we should reconsider whether we should keep a US\$ key currency system. It is helpful to escape from the US\$ key currency in the intra-regional transactions in order to prevent much larger crisis in East Asia from the lesson of the recent depreciating euro.
- Related with the US\$ key currency system, a part of US government bonds, which finance its fiscal deficits (12.3% of GDP), should be issued in terms of East Asian currencies in order that households and governments in East Asia should not depreciate their holdings of US government bonds because of possible depreciation of the US\$. The governments of East Asian countries (especially Japan and China) should make cooperation to negotiate the US government.



## VAR models for Japan

- We use two kinds of VAR models to investigate the effects of exchange rate on current account.
- (1) Four-variable VAR model (**Model J1**): the logarithm of real effective exchange rate (REER) of the JPY, the ratio of Japanese CA in terms of GDP, the Japanese real interest rate, and the Japanese GDP growth rate.
- (2) Four-variable VAR model (**Model J2**): the ratio of outward FDI in terms of domestic investments and the ratio of IA to CA as well as the logarithm of the REER of the JPY and the ratio of Japanese CA to GDP.
- Sample periods: (1) 1980Q1 to 1990Q4 and (2) 1991Q1 to 2006Q4



# VAR models for East Asia

- East Asia includes eight countries (Japan, China, Korea, Singapore, Malaysia, Indonesia, the Philippines, and Thailand) .
- We use two kinds of VAR models to investigate the effects of FXR on CA for East Asia as a whole.
- East Asia excluding Japan
  - (1) Four-variable VAR model (**Model EA1**): the logarithm of REER of East Asian currencies, a ratio of East Asian CA to GDP, East Asian real interest rate, and East Asian GDP growth rate.
  - (2) Four-variable VAR model (**Model EA2**): a ratio of inward FDI to domestic investments and a ratio of IA to CA in East Asia as well as logarithm of REER of East Asian currencies and a ratio of East Asian CA to GDP.
- East Asia including Japan
  - (1) Four-variable VAR model (**Model EA3**): the same four-variables with Model EA1.
- Sample period: 1991Q1 to 2006Q4