Management of Capital Flows Towards Financial Stability and Resilience of Domestic Financial Markets in Emerging Asia

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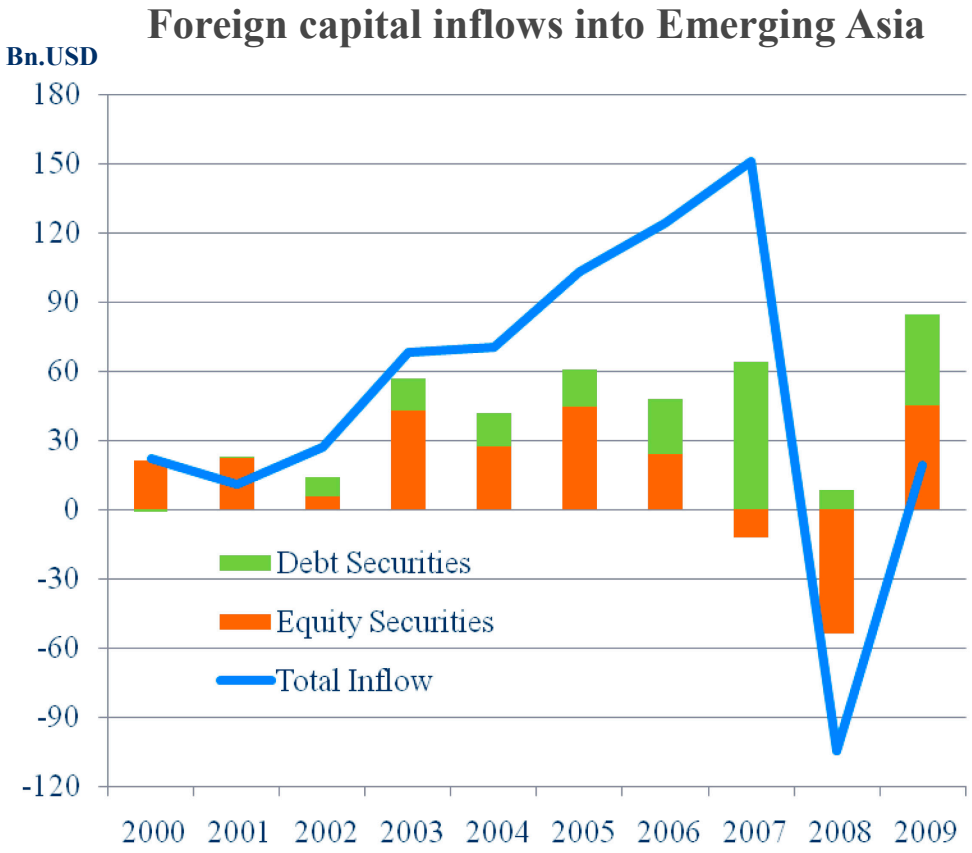
Benefits of Capital Inflows

- Allow countries with limited savings to finance productive investment projects
- Foster diversification of investment risks
- Promote more efficient intertemporal trade/consumption
- Sometimes come with technology transfers (e.g. FDI)
- Contribute to the development of domestic financial markets
- Indicate market confidence in the economy

Type of risks arising from surges in capital inflows

- **Macroeconomic risks**
  - – Increase inflationary pressures/overheating
- **Financial instability**
  - – Fuel domestic lending boom/asset price bubbles
- **Sudden reversal of massive capital flows**
  - – Aggravating boom and bust cycles of asset prices

After the credit crisis, there have been surges of capital inflows to Asia



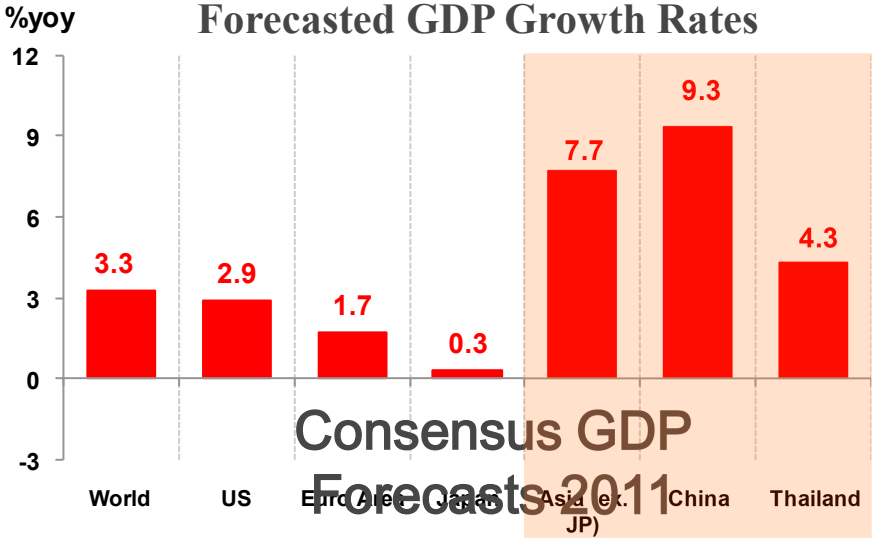
Note: Asia includes Korea, Indonesia, Philippines, Taiwan and Thailand

This is a result of

- **Growth differentials**
- **Interest rate differentials**
- **Improvements in the current account balances of Emerging Asia**
- **Movement of excess global liquidity/carry trade**
- **Prospect of currency appreciation**

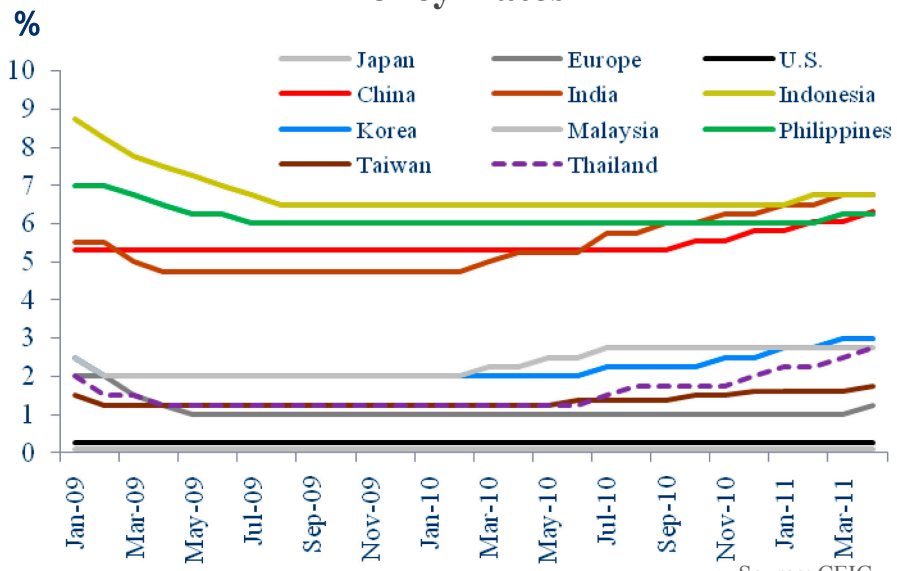
Factors driving capital flows

Forecasted GDP Growth Rates



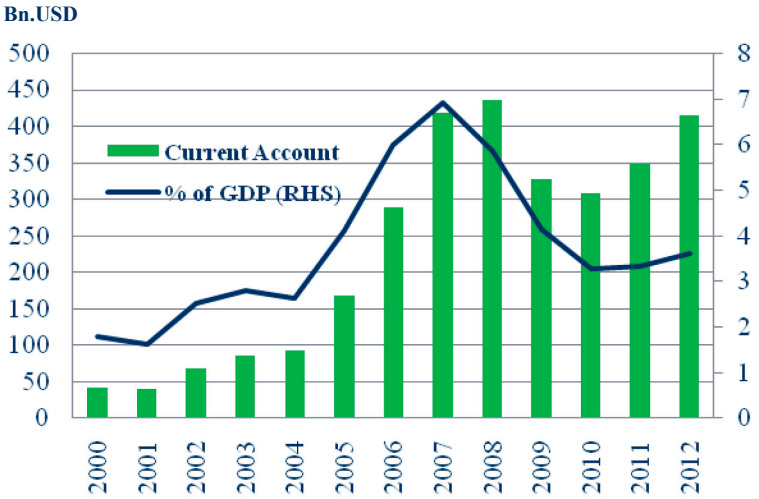
Source: Consensus forecast as of March and April 2011 (Survey date 4 April 2011)

Policy Rates



Source: CEIC

Developing Asia Current Account Balance



Source: IMF WEO

Policy Challenge: How to mange investment inflows effectively to avoid financial instability

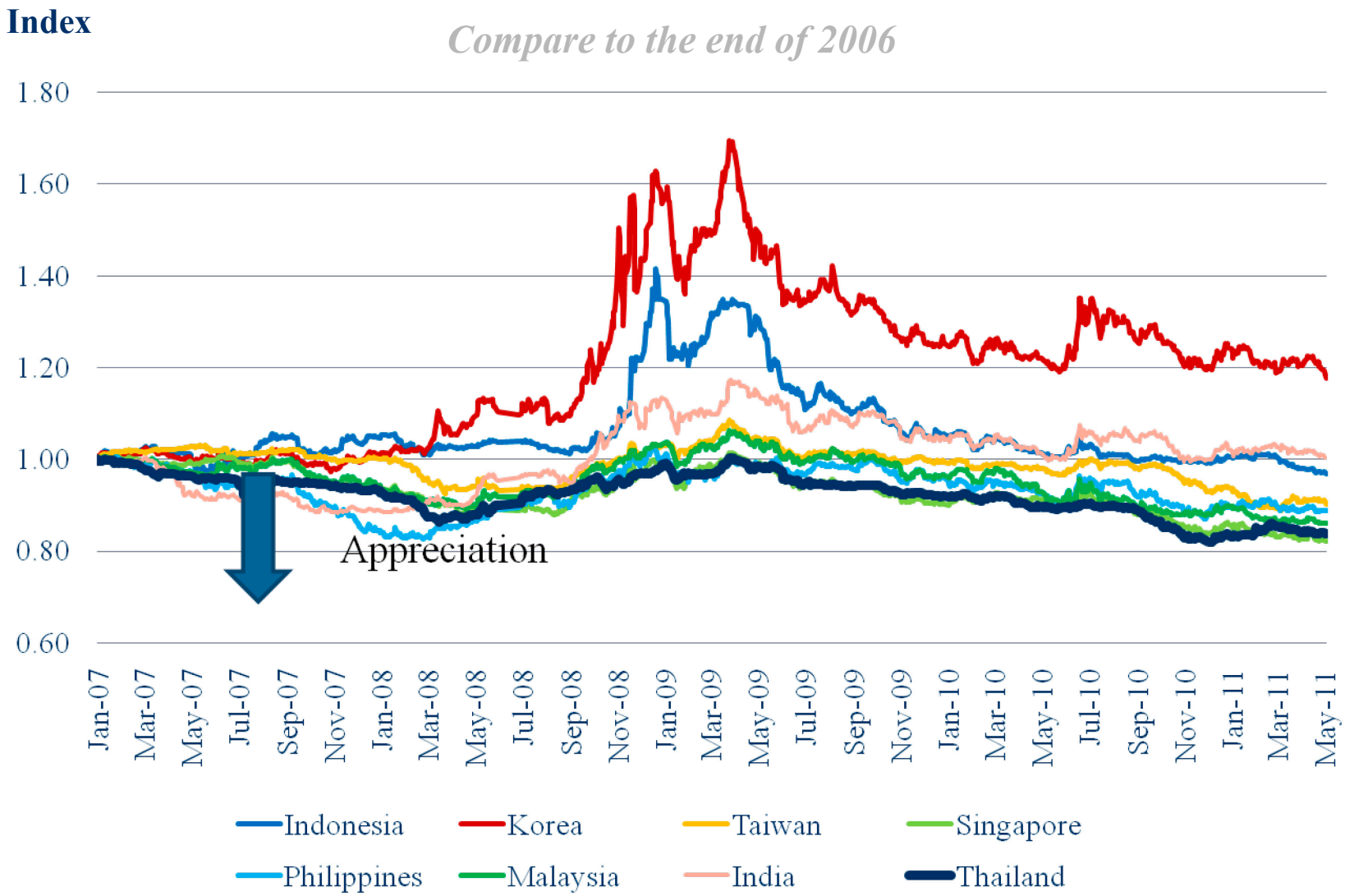
Options :

1. More flexible exchange rate policy
2. Reserves accumulation
3. Monetary policy: keep low rate as long as possible
4. Reinforcing prudential measures
5. Liberalization of capital outflows
6. Capital controls
7. Develop deep and resilient domestic financial market (fixed income, equities, FX) to absorb more capital inflows

Option 1 : More flexible exchange rate policy

- As a buffer that lessens valuation pressures in domestic assets
- Most Asian economies have allowed their exchange rate to appreciate
- Feasible if the exchange rate is undervalued
- Concerns on export competitiveness (if exchange rate is currently overvalued)
- Effects on inflation

Movements regional currencies against USD



Source : Bloomberg, BOT calculations

Peer currencies appreciation rates

YOY	2007 (%)	2008 (%)	2009 (%)	2010 (%)	As of 29 April 2011/ End 2010 (%)
Indonesia	-4.26	-14.88	16.98	4.90	5.04
Korea	-0.71	-25.66	8.14	2.63	5.91
Taiwan	0.27	-0.80	1.83	10.48	1.80
Singapore	6.07	0.19	2.74	8.80	5.40
Philippines	18.73	-12.91	2.59	5.47	2.50
China	6.96	6.93	0.08	3.31	1.77
Malaysia	6.41	-4.62	1.43	11.12	4.20
India	12.25	-18.62	3.66	3.97	1.69
Thailand	6.81	-3.38	4.70	10.64	0.90

Option 2 : Reserves accumulation

- As self-insurance
- Possible if reserves are at a low level from the precautionary perspective
- Could be an incentive to maintain an undervalued exchange rate and global imbalances
- Could delay adjustments in the export sector that itself needs improvements in productivity and competitiveness

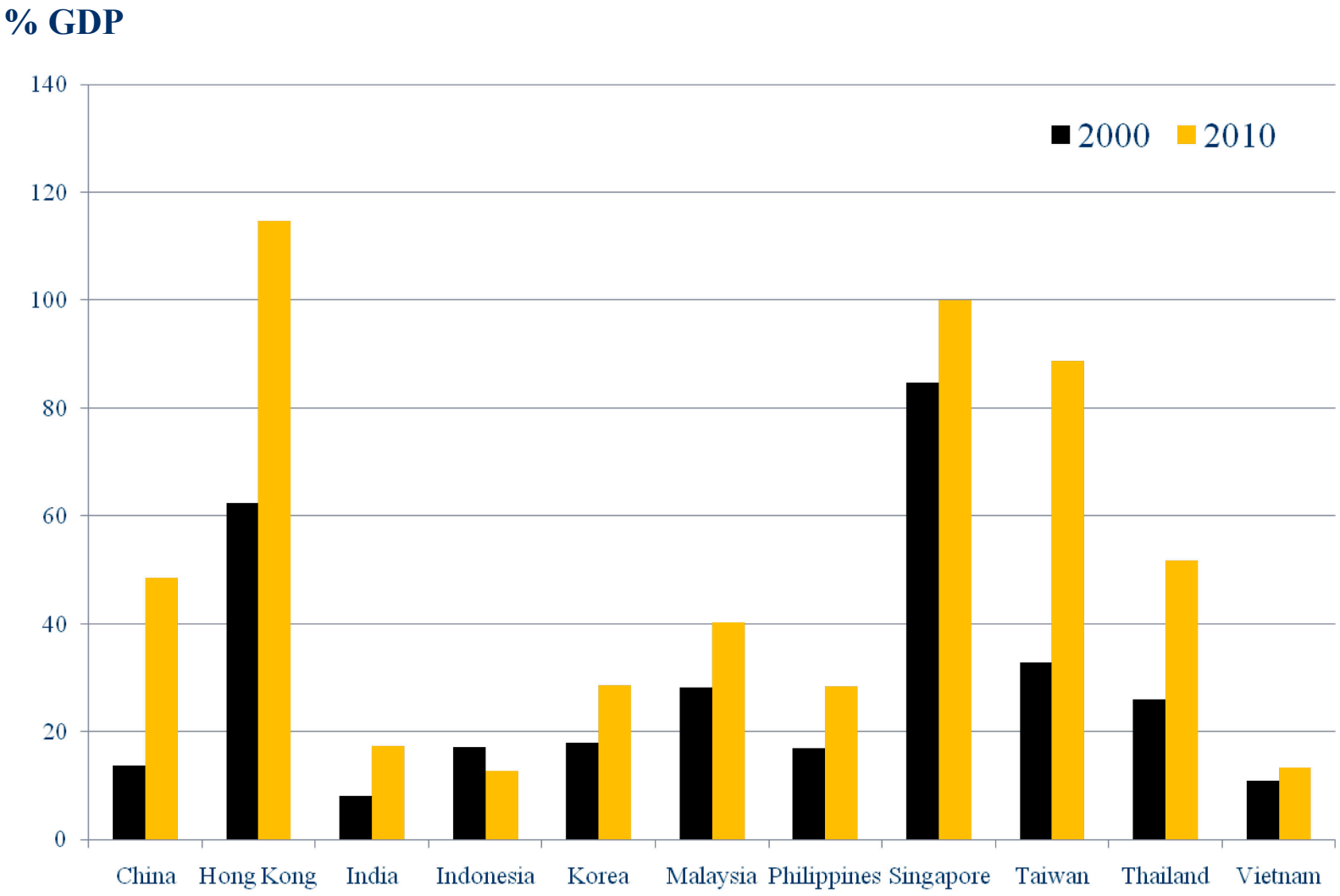
FX reserves have been increasing

FX Reserves at selected central banks

Billion USD	2000	2010
China	166	2,847
Hong Kong	106	258
Indonesia	28	90
Korea	96	287
Malaysia	26	96
Philippines	13	54
Singapore	80	223
Taiwan	107	382
Thailand	32	165

Source : CEIC and IMF

Asian Countries' FX Reserves as a % of GDP



Source : CEIC, IMF, BOT Staff Calculations

Limitations of reserves accumulation

- **Costs of sterilization set to be rising**
- **Ability of the central bank to absorb all the extra liquidity through sterilization**
- **Costs of large reserves and costs of exchange rate appreciation measured in terms of local currency/mark-to-market losses**
- **Induce more inflows**

  - As reserves increase, market participants anticipate stronger exchange rates, paradox of FX intervention

Rising costs of sterilization reflected by policy rates normalization in Asia

End of period	2009	May 2011
China	5.31	6.06
India	4.75	6.75
Indonesia	6.50	6.75
Korea	2.00	3.00
Malaysia	2.00	2.75
Philippines	6.00	6.25
Taiwan	1.25	1.63
Thailand	1.25	2.75
Vietnam	8.00	9.00

Source : CEIC

Option 3 : Monetary policy, keeping low rates as long as possible

- **Reduce interest rate differentials to discourage capital inflows**
- **Not viable when inflation outlook is on the upside**
  - Commodity prices
  - Output gap
- **Interest rate differential is not the only factor that determines capital inflows**
- **Not effective when interest rate level is already very low**

Option 4 : Reinforcing prudential measures and create a more resilient banking system

- To temper credit booms
- Should aim to address inflows in the form of debt and financial FDIs
- Encourage less reliance on foreign borrowing/funding when local funding can be found
- Reduce mismatching (both currency and maturity)
- Promote counter cyclicality of bank lending and capital inflows
- Strong supervision esp. for systemetically important financial institutions
- Close monitoring of lending to certain sectors

Macroprudential Regulation in Asia

- **Korea**
  - **May 2011: Limit banks' FX forward position (effective on June 1,2011)**
    - **200% of capital for foreign banks**
    - **40% of capital for local banks**
  - **August 2011: Impose levy on banks' total foreign currency-denominated debt exclusive of foreign currency-denominated deposits . The amount of tax is based on maturity**
    - **Less than 1 year: 20 bps**
    - **1-3 years: 10 bps**
    - **3-5 years: 5 bps**
    - **More than 5 years: 2 bps**

Macroprudential Regulation in Asia (cont.)

- **Taiwan**
  - November 2009: Restrictions regarding foreign inflows into time deposits
    - Capital inflow by NR cannot be deposited there
    - Time deposits held by NR cannot be renewed upon maturity
    - 30% of remitted funds can be invested in short-term investments excluding time deposits. The purpose of the remaining portion must be reported
  - January 2010: Asks banks to settle foreign-exchange trades daily to curb big swings in currency

Macroprudential Regulation in Asia (cont.)

- **Hong Kong**
  - **August 2010: Real estate control measure**
    - **Limit LTV ratio at 60% for property value greater than HK$12 mn**
    - **HKMC suspend application of mortgage loans exceeding 90% LTV ratio**

- **Singapore**
  - **January 2011:**
    - **The cap on LTV ratio for mortgage lending was lowered from 70% to 60% for individuals with one or more outstanding housing loans**
    - **LTV for non-individuals was lowered to 50%**

  - **August 2010: Real estate control measures**
    - **Application of seller's stamp duty (SSD) for those who sell property within 3 years of purchase**
    - **The SSD rate is applied as follows:**
      - **1% for first $180,000**
      - **2% for first $180,000**
      - **3% for the remaining balance**

Macroprudential Regulation in Asia (cont.)

- **Thailand**
  - On November 2010, BOT introduced a Risk Weight (RW) scheme in which banks must hold more capital if the Loan to Value (LTV) ratio exceeds a certain threshold, in which:
    - Property over 10 Million Baht

      -LTV Ratio ≤ 80% = RW 35%

      -LTV Ratio > 80% = RW 75%
    - Property under 10 Million Baht

      High Rise (effective Jan 2011)

      -LTV Ratio ≤ 90% = RW 35%

      -LTV Ratio > 90% = RW 75%

      Low Rise (effective Jan 2012)

      -LTV Ratio ≤ 95% = RW 35%

      -LTV Ratio > 95% = RW 75%

Option 5 : Liberalization of capital outflows

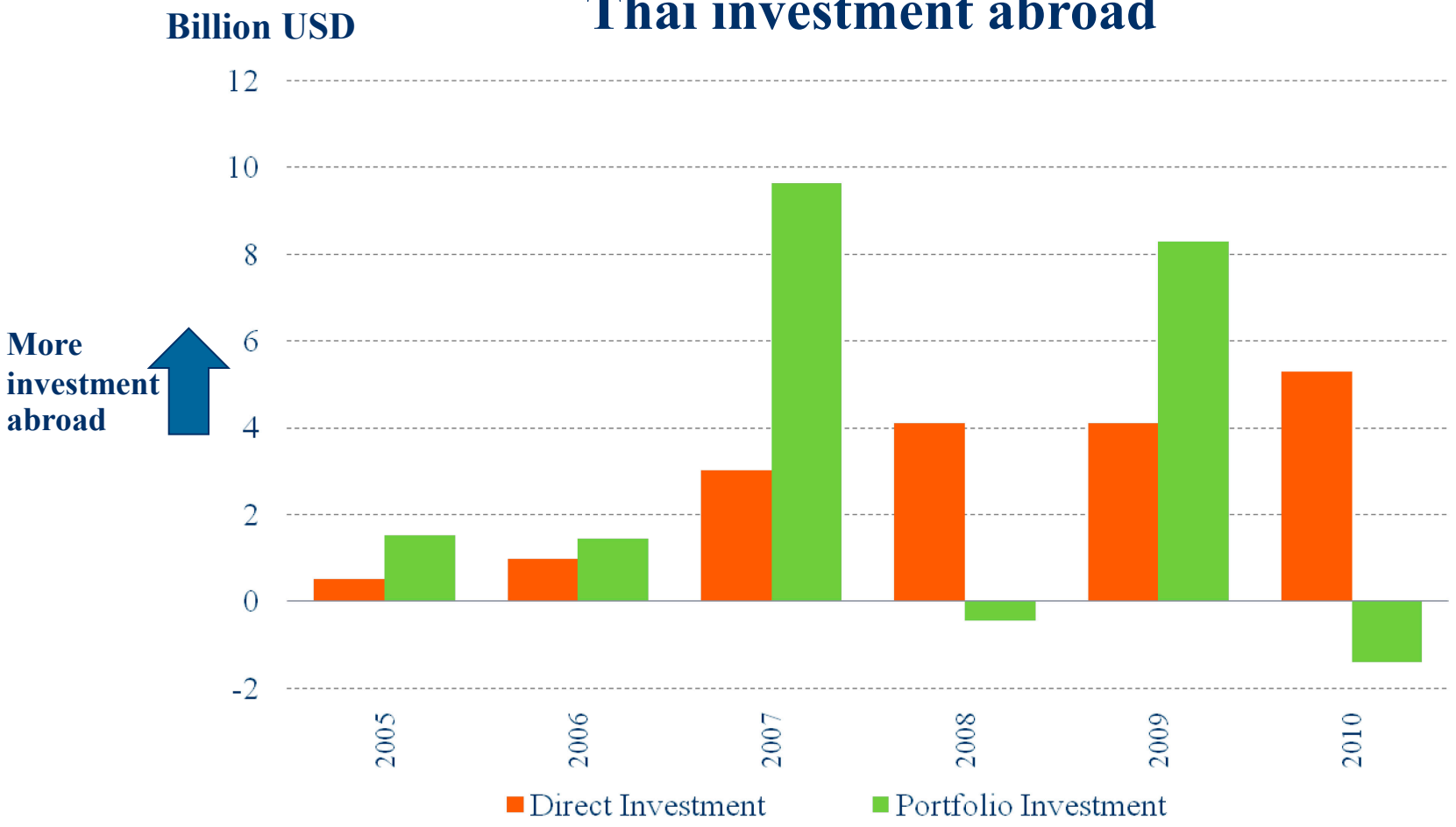
- Creating more flexibility in the economy
- But effectiveness reduced by home bias
- May have severe negative impact during difficult times

Capital outflow liberalization has not been effective in some countries including Thailand due to

- Home bias
- Uncertain conditions in global market
- Lack of Financial literacy
- Higher rates of return in domestic market
  - Stock return
  - Interest rate differentials
  - Expected local currency appreciation

Nevertheless, Thailand's capital outflows are set to be rising as more measures are relaxed since 2007

Thai investment abroad



Option 6 : Capital controls: Throwing sand in the wheel?

- Imposition of new "fine-tuning" capital controls to slow down inflows
- Evidence on effectiveness of control is mixed
- Complement to other policy measures, not substitutes
- Moving away from administrative control to market-based control (e.g. tax on inflows)
- Viable for countries with less liberalized capital account but already liberalized countries could be severely penalized
- High administrative costs and distortions
- Create negative externalities and widespread adoption could hinder the process of global financial integration

Thailand's Unremunerated Reserve Requirement

- Introduced on 18 Dec 2006
- Financial institutions were required to withhold 30% of currencies bought against THB
- Exceptions were those related to goods and services, repatriation of investment by Thai national abroad
- FDI or unrequited transfers were also exempted with legitimate proof
- On 19 Dec 06, controls on stock market investment were lifted

Lessons from Thailand's Unremunerated Reserve Requirement (URR) introduced on 18 Dec 2006

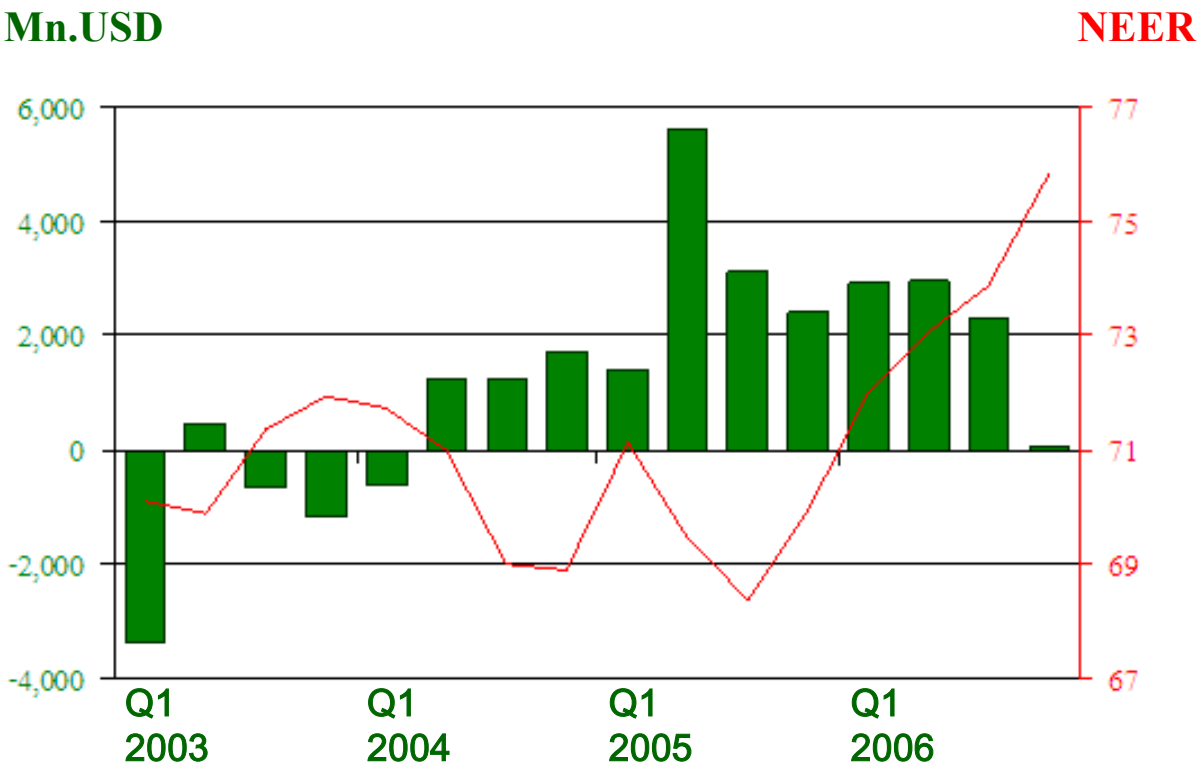
Rationale

- **Marked acceleration in capital inflows in 2006, especially those related to non-banks (at 8.1% of GDP)**
- **Fast FX appreciation unjustified by fundamentals could threaten the economy**
- **FX intervention has high costs and not very effective in dealing with large inflows**
- **Other less drastic measures that had been previously introduced were not effective in deterring one-way appreciation**
- **Experiences from other countries suggest URR-type measures were effective and flexible**

(Million USD)	Average 2001-2004	2005	2006
Current A/C	4,338	-7,825	3,240
Capital and Financial A/C[1/]	-1,613	12,558	8,232
(% of GDP)	(-1.4)	(7.1)	(4.0)
o/w Bank	-165	290	-8,607
o/w Non-Bank	-1,924	10,969	16,620
(% of GDP)	(-0.4)	(6.2)	(8.1)
Balance of Payments	2,857	5,422	12,742
International Reserves	49,832[2/]	52,066	66,985
Forward Obligations	4,600[2/]	3,840	6,941
External Debts	51,312[2/]	52,040	58,296[3/]

Capital inflows and exchange rates prior to the introduction of URR (1)

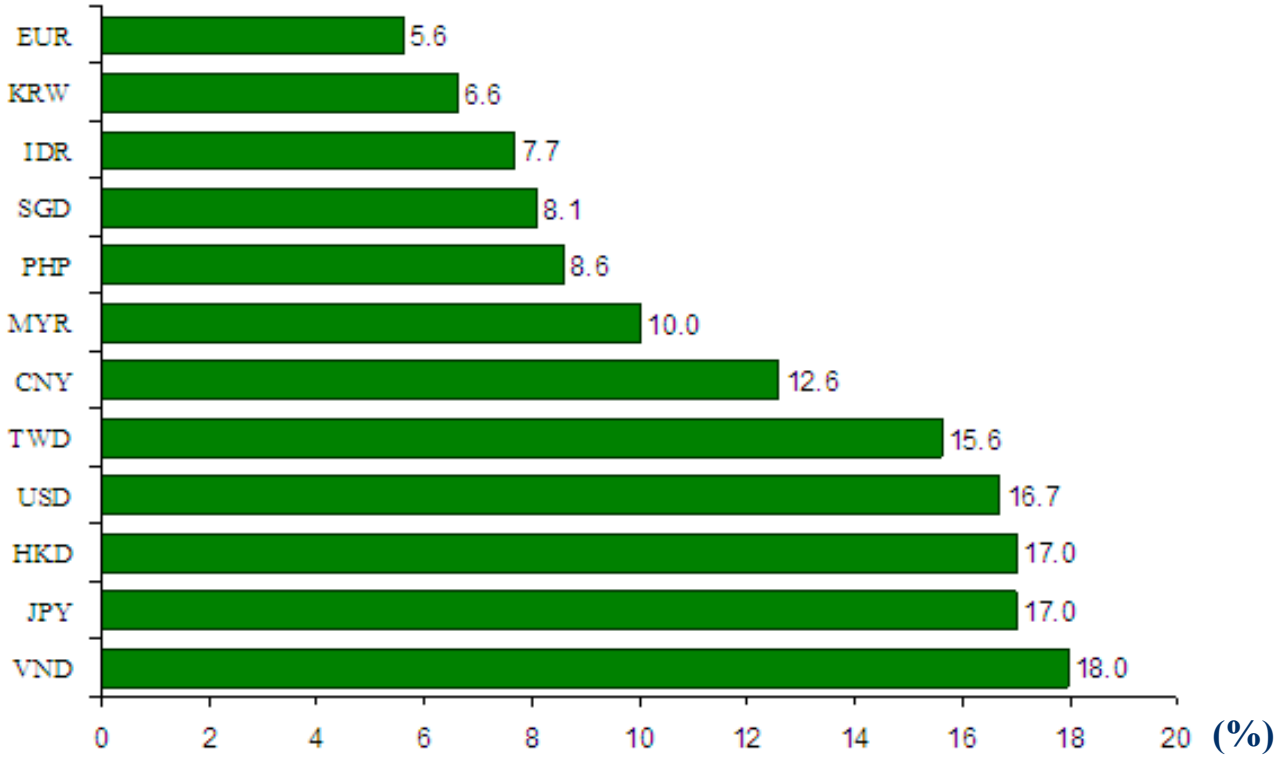
Capital inflows and THB NEER



Source : Bank of Thailand

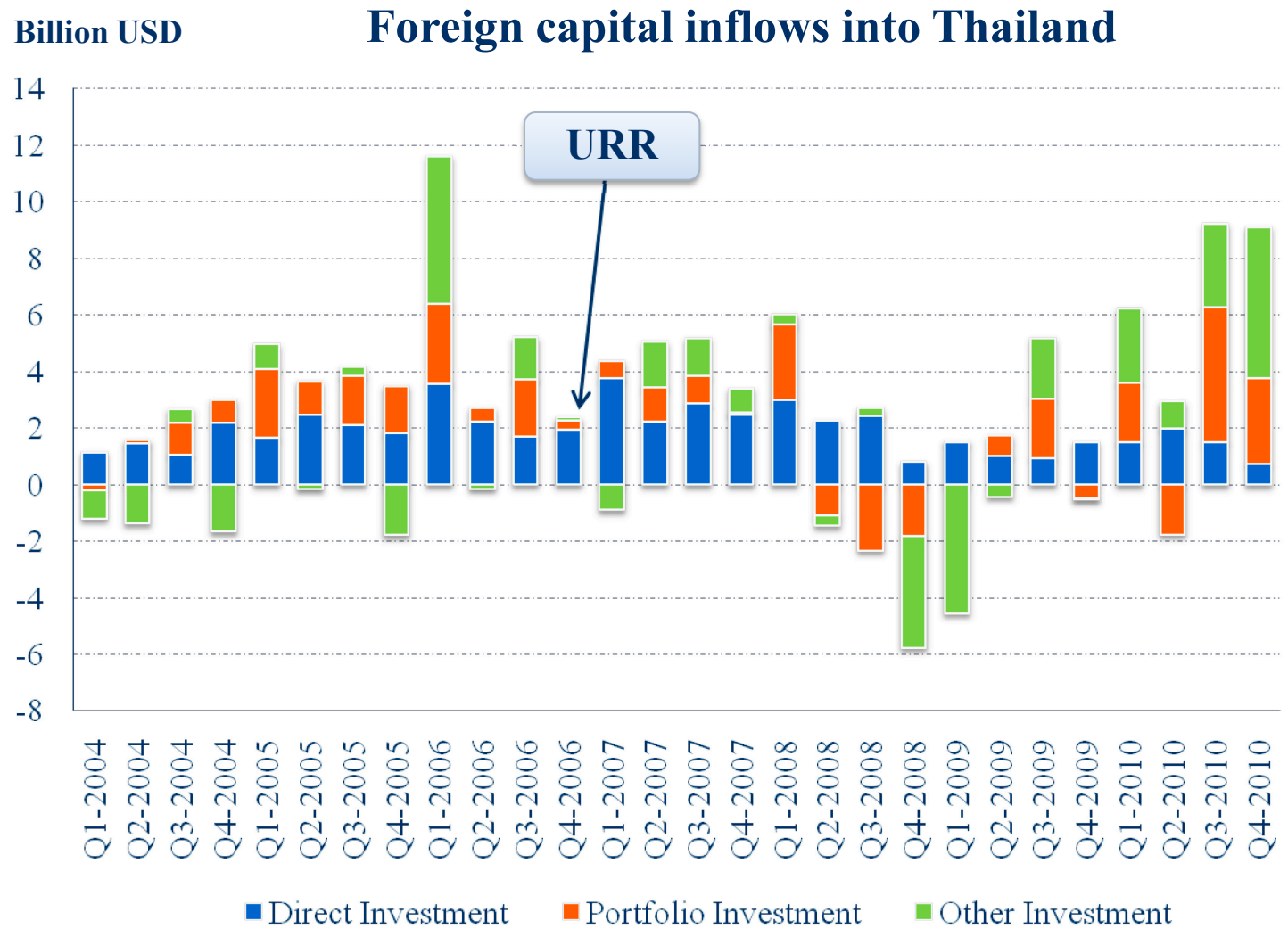
Capital inflows and exchange rates prior to the introduction of URR (2)

THB relative to major and regional currencies (30 Dec 05-18 Dec 06)



Source : Bank of Thailand

Lessons learned from Thailand's URR: Capital movement



Source : Bank of Thailand

Lessons learned from Thailand's Unremunerated Reserve Requirement

Immediate effects

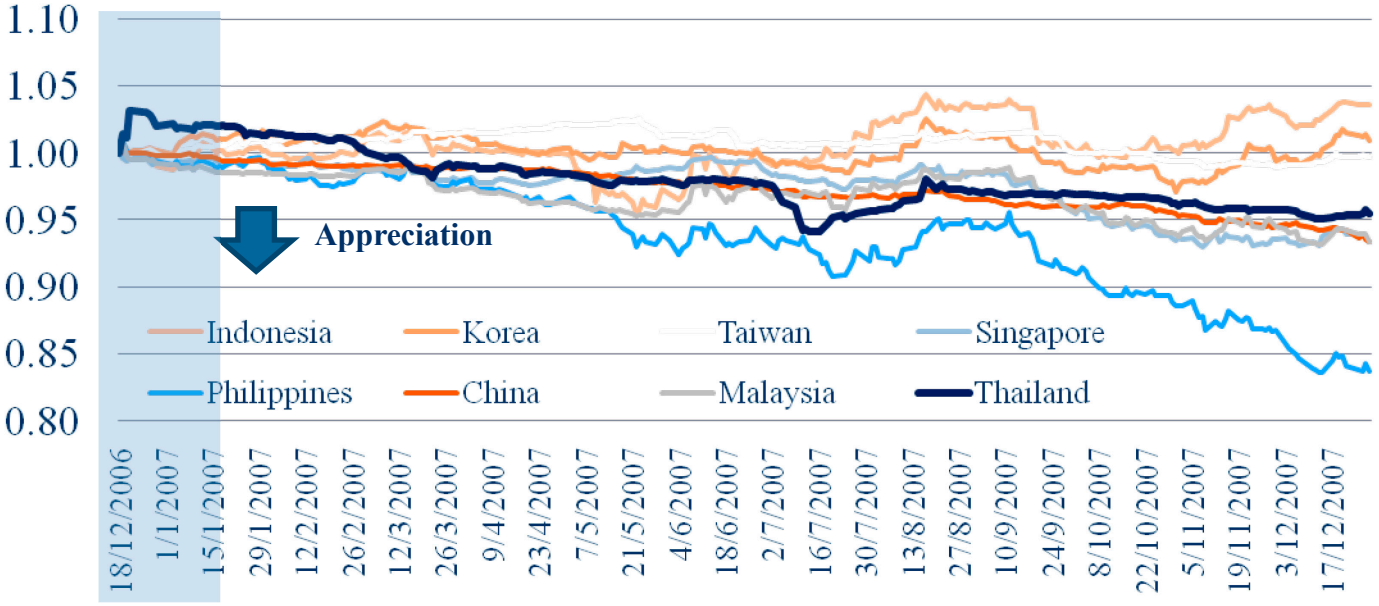
- Average interbank THB depreciated from 35.337 per USD on 18 Dec 2006 and to 35.815 per USD on 19 Dec 2006
- On 18 Dec 2006, the Stock Exchange of Thailand Index experienced a historic fall. The exemption made to stock market investment on the next day, later led to a bounce in the index.

Short-term effects

- URR succeeded in deterring the acceleration of THB appreciation, and the appreciation rate became lower relative to peer currencies for around 2 months.

Longer-term effects

- Global events (e.g. financial crises in the major economies) from mid-2007 later led to large swings in THB
- On 3 Mar 2008, URR was lifted. In the following months, the THB depreciated in line with regional currencies as the Financial Crisis unfolded



Option 7 : Develop deep and resilient domestic financial markets to absorb more capital inflows

- **Promotion national savings through financial market investment vehicles**
  - Mutual funds, Exchange-traded funds (ETFs), Public and private pension funds that invest in different classes of asset (equity, money market, bond, commodities, etc.)
- **Create more supply through new products such as**
  - Local government and/or agency debts
  - Securitization of assets (e.g. basic ABS and MBS, but most likely not CDOs)
  - Covered bonds for infrastructure projects
- **Must be sure that authorities can monitor and properly regulate new products**

Conclusions

- Emerging Asia could still benefit from capital inflows
- However, risks associated with the inflows are real and must be mitigated
- There are several policy options to manage the risks associated with the inflows and an appropriate policy mix is crucial

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