Thailand’s recent experience in managing capital flows: key issues and new challenges*

Based on:


** Views expressed are of the authors and do not necessarily represent those of the Bank of Thailand.
Outline of Presentation

I. Introduction
II. Capital flow developments
   - Trends, size and composition (flows and stocks)
   - Determinants of capital flows
III. Impacts of large and volatile capital flows and Thailand’s capital flow management framework
IV. Selected issues on capital flows policies
   - Capital account liberalization framework
   - Enhancing economic resiliency against volatile flows
   - Conclusions
V. Potential topics for future research

Contrasting features between the two waves of large capital inflows to emerging markets in the past two decades

<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Current account deficit</td>
<td>Current account surplus</td>
</tr>
<tr>
<td>Low level of outflows</td>
<td>Increasing outflows</td>
</tr>
<tr>
<td>Moderate increase in reserves</td>
<td>Substantial reserves accumulation</td>
</tr>
</tbody>
</table>

Sources: IMF, Values for 2008 are IMF staff projections.

Evolution of international capital mobility

Capital mobility and the incident of banking crisis: All countries, 1800-2007

Source: Reinhart (2008), Eight hundred years of financial folly

Current Account Balances, Capital Inflows, and Reserves by Region

Sources: IMF, Values for 2008 are IMF staff projections.
**Episodes of Large Net Private Capital Inflows: Summary Statistics**

<table>
<thead>
<tr>
<th></th>
<th>Completed during 1987-1998</th>
<th>Completed during 1999-2006</th>
<th>Ongoing</th>
<th>All Episodes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of episodes</td>
<td>53</td>
<td>34</td>
<td>22</td>
<td>109</td>
</tr>
<tr>
<td>Average size (percent of GDP) /</td>
<td></td>
<td>4.7</td>
<td>5.1</td>
<td>7.5</td>
</tr>
<tr>
<td></td>
<td>(5.2)</td>
<td>(5.8)</td>
<td>(8.7)</td>
<td>(6.1)</td>
</tr>
<tr>
<td>Duration (years) /</td>
<td></td>
<td>3</td>
<td>1.5</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>(3.3)</td>
<td>(2.6)</td>
<td>(3.6)</td>
<td>(3.1)</td>
</tr>
<tr>
<td>Ended abruptly (number of episodes)</td>
<td>26</td>
<td>14</td>
<td>-</td>
<td>40</td>
</tr>
<tr>
<td>in sudden stop</td>
<td>22</td>
<td>12</td>
<td>-</td>
<td>34</td>
</tr>
<tr>
<td>in currency crisis</td>
<td>10</td>
<td>3</td>
<td>-</td>
<td>13</td>
</tr>
</tbody>
</table>

Based on cross-country study of 52 emerging countries (8 advanced small open economy, and 44 developing countries) during 1985-2007.

**Sources:** Capital Inflows: Macroeconomic Implications and Policy Responses by Roberto Cardarelli, Selim Elekdag, and M. Ayhan Kose, IMF WP/09/40 (2009).

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**II. Recent capital flow developments:**

**trends, sizes and compositions**

**Definition**

- **Gross capital inflows are defined as nonresident investment**
  - FDI inflow
  - Portfolio investment inflow
  - Other investment inflow

- **Gross capital outflows are defined as resident investment**
  - FDI outflow
  - Portfolio investment outflow
  - Other investment outflow

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**Notes:** Figures above show quarterly moving-average data on gross inflow and its components, 1988Q1-2008Q2. Emerging Asia excludes Indonesia, Korea, Malaysia, Philippines, Vietnam, India and Thailand. Emerging Latin includes Argentina, Brazil, Chile, Colombia, Mexico, Peru and Venezuela. Other Emerging includes Czech, Hungary, Russia, South Africa and Turkey.
Outflows from Emerging Asia are at historic highs, due largely to increase in portfolio and FDI outflows.

- **Total outflows = Increase in Resident’s holdings of foreign net assets**
  - **FDI outflow**
  - **Portfolio investment outflow**
  - **Other investment outflows**

**Evolution of Overall Balance of Payments**

CA and KA were in mirror images during periods leading to and right after the 1997 crisis. However, more recently, both were in surpluses.

**Evolution of Capital Inflows**

Inflows to Thailand have shifted from bank loans to deriving more from FDI and portfolio investment over recent years.

**Evolution of Capital Outflows**

Portfolio outflows by residents have risen rapidly in 2007, following liberalization measures.
Size and volatility of capital flows have increased significantly in recent period, especially for portfolio flows.

<table>
<thead>
<tr>
<th></th>
<th>1993-2000</th>
<th></th>
<th></th>
<th>2001-2008</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>S.D.</td>
<td>C.V.</td>
<td>Mean</td>
<td>S.D.</td>
<td>C.V.</td>
</tr>
<tr>
<td>Direct investment</td>
<td>Net</td>
<td>270</td>
<td>370</td>
<td>137%</td>
<td>465</td>
<td>426</td>
</tr>
<tr>
<td></td>
<td>Inward</td>
<td>425</td>
<td>536</td>
<td>126%</td>
<td>1,353</td>
<td>829</td>
</tr>
<tr>
<td></td>
<td>Outward</td>
<td>-155</td>
<td>191</td>
<td>123%</td>
<td>-886</td>
<td>559</td>
</tr>
<tr>
<td>Portfolio investment</td>
<td>Net</td>
<td>194</td>
<td>291</td>
<td>149%</td>
<td>77</td>
<td>466</td>
</tr>
<tr>
<td></td>
<td>Inward</td>
<td>945</td>
<td>809</td>
<td>85%</td>
<td>2,726</td>
<td>2,771</td>
</tr>
<tr>
<td></td>
<td>Outward</td>
<td>-750</td>
<td>689</td>
<td>91%</td>
<td>-2,648</td>
<td>2,631</td>
</tr>
<tr>
<td>Other investments</td>
<td>Net</td>
<td>-217</td>
<td>547</td>
<td>252%</td>
<td>25</td>
<td>380</td>
</tr>
<tr>
<td></td>
<td>Inward</td>
<td>2,383</td>
<td>1,772</td>
<td>74%</td>
<td>3,259</td>
<td>1,365</td>
</tr>
<tr>
<td></td>
<td>Outward</td>
<td>-2,600</td>
<td>2,071</td>
<td>79%</td>
<td>-3,233</td>
<td>1,265</td>
</tr>
</tbody>
</table>

Note: Coefficient of variation (C.V.) = absolute value of (S.D. divided by mean).

Source: BOT

However, some balance sheet mismatches remain.

International Investment Position (IIP) (million USD)

<table>
<thead>
<tr>
<th>Year</th>
<th>Amount</th>
<th>% of GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Thailand's IIP by Debt-Equity Classification

<table>
<thead>
<tr>
<th>%</th>
<th>Year</th>
<th>Debt</th>
<th>Equity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Net assets concentrate in the official sector.

Asset-liability mismatch remains large in the non-bank sector.

Assets are mostly in debt form, while liabilities are mostly equity form.
Comparisons of foreign liabilities (IIP data) among emerging economies

Comparisons of foreign assets (IIP data) among emerging economies

Potential drivers of capital flows

Determinants of Capital Inflows
Empirical Evidence: Case of Thailand

Dependent variables:
Non-resident net capital flows
(Total, FDI, Portfolio, Others)

Independent variables:
Pull and push factors

Sample frequency/coverage:
Quarterly data, 1993Q1-2008Q3

Estimation method:
Vector Error Correction Model (VECM)

Net NR inflows and other variables

VECM Results
Sample Period: 1993Q1-2008Q3

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>FDI</th>
<th>Portfolio</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Real GDP growth (%)</td>
<td>0.0760***</td>
<td>0.0192***</td>
<td>-0.0093***</td>
<td>0.0735***</td>
</tr>
<tr>
<td></td>
<td>[3.437]</td>
<td>[3.666]</td>
<td>[5.347]</td>
<td>[5.210]</td>
</tr>
<tr>
<td>Current account to GDP (%)</td>
<td>-0.0493***</td>
<td>0.0010</td>
<td>-0.0038***</td>
<td>-0.0549***</td>
</tr>
<tr>
<td></td>
<td>[2.371]</td>
<td>[0.220]</td>
<td>[2.419]</td>
<td>[3.977]</td>
</tr>
<tr>
<td>Real interest rate differential</td>
<td>-0.1987***</td>
<td>-0.0955***</td>
<td>0.0142***</td>
<td>-0.0612**</td>
</tr>
<tr>
<td></td>
<td>[4.143]</td>
<td>[2.397]</td>
<td>[3.766]</td>
<td>[2.001]</td>
</tr>
<tr>
<td>World real GDP growth (%)</td>
<td>0.3947***</td>
<td>0.0898***</td>
<td>0.0137***</td>
<td>0.0634</td>
</tr>
<tr>
<td></td>
<td>[3.892]</td>
<td>[3.751]</td>
<td>[1.716]</td>
<td>[0.971]</td>
</tr>
<tr>
<td>Investor risk appetite (Log)</td>
<td>-0.6114</td>
<td>-0.3655***</td>
<td>0.2724***</td>
<td>0.2385</td>
</tr>
<tr>
<td></td>
<td>[1.426]</td>
<td>[3.698]</td>
<td>[8.282]</td>
<td>[0.856]</td>
</tr>
<tr>
<td>Constant</td>
<td>5.6560</td>
<td>7.3526</td>
<td>9.3997</td>
<td>8.5499</td>
</tr>
<tr>
<td>Alpha</td>
<td>-0.1873</td>
<td>-0.1915***</td>
<td>1.5624***</td>
<td>-0.5106</td>
</tr>
<tr>
<td></td>
<td>[1.516]</td>
<td>[2.963]</td>
<td>[4.728]</td>
<td>[1.685]</td>
</tr>
<tr>
<td>Observations</td>
<td>60</td>
<td>60</td>
<td>60</td>
<td>60</td>
</tr>
<tr>
<td>Adjusted R²</td>
<td>0.37</td>
<td>0.41</td>
<td>0.62</td>
<td>0.25</td>
</tr>
</tbody>
</table>
**VECM Results**

**Sample Period: 2000Q1-2008Q3**

<table>
<thead>
<tr>
<th></th>
<th>Total (1)</th>
<th>FDI (2)</th>
<th>Portfolio (3)</th>
<th>Other (4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Real GDP growth (%)</td>
<td>0.0557**</td>
<td>0.0113</td>
<td>0.0319**</td>
<td>0.0114</td>
</tr>
<tr>
<td>Current account to GDP</td>
<td>0.0201</td>
<td>0.0623***</td>
<td>-0.0503***</td>
<td>0.0392</td>
</tr>
<tr>
<td>Real interest rate differential</td>
<td>-0.0433</td>
<td>-0.0993***</td>
<td>0.1234***</td>
<td>-0.1493***</td>
</tr>
<tr>
<td>World real GDP growth (%)</td>
<td>0.1899***</td>
<td>0.2130***</td>
<td>-0.0829***</td>
<td>-0.7000***</td>
</tr>
<tr>
<td>Investor risk appetite (Log)</td>
<td>1.0679***</td>
<td>0.3938***</td>
<td>0.3195***</td>
<td>1.3686***</td>
</tr>
<tr>
<td>Constant</td>
<td>11.0757</td>
<td>10.0543</td>
<td>9.4352</td>
<td>13.5376</td>
</tr>
<tr>
<td>Alpha</td>
<td>-0.6814***</td>
<td>-0.0029</td>
<td>-0.7858***</td>
<td>-0.1217</td>
</tr>
</tbody>
</table>

| Observations | 35 | 35 | 35 | 35 |
| Adjusted $R^2$ | 0.67 | 0.34 | 0.84 | 0.40 |

**Granger Causality Tests**

<table>
<thead>
<tr>
<th>Y</th>
<th>CF_FDI</th>
<th>CF_PORT</th>
<th>CF_OTH</th>
<th>GDP</th>
<th>CA</th>
<th>WGD</th>
<th>RISKAPP</th>
<th>INTDIF</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.0737</td>
<td>0.273</td>
<td>0.256</td>
<td>0.29215</td>
<td>1.368</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.929)</td>
<td>(0.762)</td>
<td>(0.775)</td>
<td>(0.7478)</td>
<td>(0.263)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.508</td>
<td>1.321</td>
<td>2.474</td>
<td>0.7243</td>
<td>1.855</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.604)</td>
<td>(0.275)</td>
<td>(0.093)</td>
<td>(0.489)</td>
<td>(0.166)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>X</td>
<td>GDP</td>
<td>4.806</td>
<td>8.884</td>
<td>0.169</td>
<td>0.2449</td>
<td>1.449</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.012)</td>
<td>(0.000)</td>
<td>(0.845)</td>
<td>(0.7836)</td>
<td>(0.244)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CA</td>
<td>0.895</td>
<td>2.576</td>
<td>0.079</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.415)</td>
<td>(0.085)</td>
<td>(0.924)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WGD</td>
<td>1.278</td>
<td>0.404</td>
<td>0.179</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.287)</td>
<td>(0.670)</td>
<td>(0.836)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RISKAPP</td>
<td>0.426</td>
<td>5.779</td>
<td>3.406</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.655)</td>
<td>(0.005)</td>
<td>(0.040)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>INTDIF</td>
<td>2.688</td>
<td>6.866</td>
<td>2.529</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.077)</td>
<td>(0.002)</td>
<td>(0.089)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: F-statistics and probability (in parentheses) shown in the table. Significant at 5% level highlighted in bold face.

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**Summary of results**

- Capital flows to Thailand exhibited **pro-cyclicality** (i.e. positively correlated with the state of the Thai economy).
- Capital flows to Thailand have been both pulled by domestic factors (growth performance and investment returns) and pushed by external factors (business cycle of industrial countries, global investors’ risk appetite, global liquidity).
- External factors, especially investors risk appetite (VIX index), appear to play relatively more important role in driving short-term capital flows.

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**III. Impacts of large and volatile capital flows and Thailand’s capital flow management framework**
Why do we need to manage capital flows?

Inflows arguably bring benefits:
- Lower the cost of capital and stimulate growth
- Increase domestic welfare due to smoothed consumption streams
- Collateral benefits such as deepen domestic financial market, improve institutional quality
- In the case of FDI, benefits also include technology transfer, improvement in human resources and management, increase in R&D activities

However, large and rapid inflows can also pose important risks!

Capital flows and risk exposures

**Size**
Large size of capital flows makes management of liquidity difficult and exposes the country to risks of sudden stop and sudden reversal.

**Volatility**
Highly volatile capital flows also destabilize the financial system and hampers financial development.

**Composition**
Forms and maturity/duration structure of capital flow matter for monetary policy as well as financial stability.

Composition matters for financial stability

**Equity vs. debt**
Equity transfers risk to the supplier of funds and away from the user of funds.

**Short-term vs. long-term**
Long-term borrowing less vulnerable to interest rate and refinancing risks.

**Investment vs. consumption**
Inflows associated with increased fixed capital formation and productivity generate future cash flows to pay off foreign liabilities.

**Foreign vs. domestic currency**
Currency mismatches may be a problem if foreign currency inflows are used to finance domestic currency earning projects.

Potential risks associated with large and rapid capital flows

**Macroeconomic risks**
- Real exchange rate appreciation
- Rapid credit growth
- Upward pressure on inflation

**Financial stability risks**
- Balance sheet mismatches
- Asset price bubbles
- Quality of loans

**Risk of large shifts in capital flows**
- A sudden stop
- A sudden reversal
**Impact on real exchange rates**

Real effective exchange rates

**Capital flows and credit expansion**

Periods of high international capital mobility have repeatedly produced international banking crises

Source: Reinhart (2008), Eight hundred years of financial folly

**Case I: Vietnam’s overheating**

Capital mobility and the incident of banking crisis: All countries, 1800-2007

Source: Reinhart (2008), Eight hundred years of financial folly
Episodes of large capital flows are more crisis prone


Procyclical nature of capital flows underlines the risks of sudden reversal to EM economies

Case II: Emerging Europe
Similarity between Emerging Europe now and East Asia prior to the 1997 crisis

Current account financing

Emerging Europe¹

East Asia²

Source: BIS, CGFS report (2008)

Case II: Emerging Europe
Vulnerability indicators 2008

(\% of GDP; unless otherwise indicated)

<table>
<thead>
<tr>
<th></th>
<th>Budget balance</th>
<th>Public debt</th>
<th>External debt</th>
<th>Financing requirement</th>
<th>Net debt/GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bulgaria</td>
<td>-4</td>
<td>14.9</td>
<td>67.3</td>
<td>-32.8</td>
<td>57.9</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>-1.5</td>
<td>26</td>
<td>36.5</td>
<td>-8.6</td>
<td>27.8</td>
</tr>
<tr>
<td>Estonia</td>
<td>0.5</td>
<td>3.6</td>
<td>115.6</td>
<td>-15.8</td>
<td>129</td>
</tr>
<tr>
<td>Hungary</td>
<td>-3.7</td>
<td>70.2</td>
<td>119.8</td>
<td>-31.7</td>
<td>86.1</td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>-3.1</td>
<td>9.1</td>
<td>73.4</td>
<td>-13.7</td>
<td>109.3</td>
</tr>
<tr>
<td>Latvia</td>
<td>-1.5</td>
<td>7.1</td>
<td>115.3</td>
<td>-19.3</td>
<td>232.5</td>
</tr>
<tr>
<td>Lithuania</td>
<td>-0.7</td>
<td>14.9</td>
<td>74.5</td>
<td>-36</td>
<td>93.2</td>
</tr>
<tr>
<td>Poland</td>
<td>-1.8</td>
<td>41.6</td>
<td>40.5</td>
<td>-13.1</td>
<td>58.8</td>
</tr>
<tr>
<td>Romania</td>
<td>3.4</td>
<td>14.1</td>
<td>46.5</td>
<td>-19.2</td>
<td>57.5</td>
</tr>
<tr>
<td>Russia</td>
<td>6.9</td>
<td>5.7</td>
<td>24.5</td>
<td>2.6</td>
<td>-30.2</td>
</tr>
<tr>
<td>Serbia</td>
<td>-2</td>
<td>38</td>
<td>56.3</td>
<td>-18.5</td>
<td>100.3</td>
</tr>
<tr>
<td>Slovakia</td>
<td>-2.1</td>
<td>35</td>
<td>48</td>
<td>-11.7</td>
<td>27.5</td>
</tr>
<tr>
<td>Ukraine</td>
<td>1.7</td>
<td>10</td>
<td>40.4</td>
<td>-15.8</td>
<td>54.9</td>
</tr>
</tbody>
</table>

Note: Net debt is external debt minus foreign exchange reserves
Source: Economist Intelligence Unit, The Economist (Nov 13, 2008)
Surge of capital flows during 2006-07 did not cause financial instability in Thailand due to improved risk management and softened domestic demand.

However, there was considerable upward pressure on Thai Baht.

Impacts of the global crisis on Thailand’s BOP

- Foreign investors sold off Thai stocks about 7 Bn USD (Jul07 until now)
- Price mechanism in equity investment helps contain capital flight by NR (-58%)

Impact on SET

- MSCI EM ASIA (RHS)
- SET

Source: BOT
Impact on exchange rate

Thailand appeared relatively resilient to the risk of a sudden reversal

<table>
<thead>
<tr>
<th>Country</th>
<th>Short-Term Debt</th>
<th>NR Holding of stocks</th>
<th>NR Holding of Bonds</th>
<th>External Mobile Capital</th>
<th>Total FX Reserve</th>
<th>Vulnerability index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indonesia</td>
<td>39,054</td>
<td>79,000</td>
<td>13,300</td>
<td>131,354</td>
<td>57,108</td>
<td>230</td>
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<tr>
<td>Korea</td>
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<td>194,000</td>
<td>49,900</td>
<td>504,346</td>
<td>242,215</td>
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<tr>
<td>Philippines</td>
<td>17,497</td>
<td>18,500</td>
<td></td>
<td>35,997</td>
<td>37,093</td>
<td>97</td>
</tr>
<tr>
<td>Taiwan</td>
<td>85,223</td>
<td>162,000</td>
<td>1,480</td>
<td>248,703</td>
<td>282,087</td>
<td>88</td>
</tr>
<tr>
<td>Malaysia</td>
<td>25,427</td>
<td>39,000</td>
<td>32,100</td>
<td>96,527</td>
<td>136,453</td>
<td>71</td>
</tr>
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<td>India</td>
<td>36,617</td>
<td>140,000</td>
<td>5,000</td>
<td>181,617</td>
<td>307,219</td>
<td>59</td>
</tr>
<tr>
<td>Thailand</td>
<td>26,363</td>
<td>35,000</td>
<td>1,500</td>
<td>62,863</td>
<td>117,050</td>
<td>54</td>
</tr>
<tr>
<td>Vietnam</td>
<td>2,000</td>
<td>6,000</td>
<td></td>
<td>8,000</td>
<td>23,872</td>
<td>34</td>
</tr>
<tr>
<td>China</td>
<td>269,572</td>
<td>2,000</td>
<td></td>
<td>269,572</td>
<td>1,806,828</td>
<td>16</td>
</tr>
</tbody>
</table>

Source: CitiBank research and BOT, August 08

Case III: USD Liquidity problems in Korea

Limited direct impacts of the global crisis on Thailand’s financial stability

- **Limited direct exposure in Thai baking sector**
  - Only 0.43% of total assets of the Thai banking sector was exposed to distressed U.S. financial institutions (1.2% exposure to total foreign assets)
  - Thai banks relied predominantly on domestic deposits as a source of fund.

- **No significant macro imbalances or vulnerabilities**
  - Stable prices, current account surplus, flexible exchange rate
  - No signs of asset price bubbles or credit quality
  - Low external debt

- **Adequate foreign exchange reserves**
Strong balance sheet of the Thai banking sector

- **Assets Liabilities**
  - Loans
  - Deposits

- Loans
  - Credit extended to exports and tourism businesses accounted for 20% of total credit
  - Thai banks' exposure to assets of troubled U.S. financial institutions is only 0.43% of total banks' assets as of Aug 2008

- Deposits
  - Deposits account for 75% of source of funds. Most deposits are retail.
  - Deposit insurance helps reduce the risk of bank run
  - Only small borrowings, mostly drawn domestically (only 0.7% external borrowing)
  - Strong capital position CAR = 15% (benchmark 8.5%)

Thailand's capital flow management framework

- **Overview of Thailand's current monetary policy framework and exchange rate regime**
  - Inflation Targeting Framework
    - Price stability as the main policy objective, while allowing sufficient policy flexibility to accommodate economic growth and financial stability
    - Target band: the core inflation to be between 0 – 3.5% on quarterly average
  - Managed Float Regime
    - The Baht is allowed to adjust to changes in market fundamentals
    - The BOT intervenes in the FX market only to curb excessive short-term volatility or to prevent disorderly adjustment of the Baht.
  - Degree of capital account openness
    - Inflows by nonresidents: relatively open with some prudential and anti-speculative measures
    - Outflows by residents: gradual and stepped liberalization
    - Hedging activities: allowed with underlying trade and investment positions

Mobile capital flows and monetary policy

- **Impossible Trinity**
  - Independent Monetary Policy
  - Free Capital Flows
  - Fixed Exchange Rate
Available policy tools to manage capital flows

- Greater FX flexibility
- Fiscal policy
- Monetary policy and financial tools:
  - Interest rate policy
  - Sterilized FX intervention
  - Reserve requirement ratio on bank deposits
- Control on short-term inflows
  - Quantitative measures (eg. quota, limits)
  - Price-based measures (eg. explicit or implicit taxes)
- Relaxation of controls on outflows

But each policy instrument has limitations …

<table>
<thead>
<tr>
<th>Policy instruments</th>
<th>Costs and limitations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greater FX flexibility</td>
<td>- Rapid appreciation may affect export sectors (loss of competition)</td>
</tr>
<tr>
<td>Tightening Fiscal policy</td>
<td>- Less relevant in cases that domestic demand is already weak</td>
</tr>
<tr>
<td>Interest rate policy</td>
<td>- Need to address domestic objective as well (i.e. price stability)</td>
</tr>
<tr>
<td>Sterilized FX intervention</td>
<td>- May not be effective in changing the direction of the currency especially when faced with sustained large inflows</td>
</tr>
<tr>
<td></td>
<td>- Sterilization costs</td>
</tr>
<tr>
<td></td>
<td>- Too much intervention could deter urgency to reform and may invite more speculation</td>
</tr>
<tr>
<td>Control on short-term inflows</td>
<td>- Effectiveness tends to erode over time</td>
</tr>
<tr>
<td></td>
<td>- Microeconomic costs due to distorted decisions and inefficiency; higher cost of capital</td>
</tr>
<tr>
<td></td>
<td>- Difficult when impose control after already liberalized</td>
</tr>
<tr>
<td>Relaxation of controls on outflows</td>
<td>- Takes time for capacity building to be effective</td>
</tr>
<tr>
<td></td>
<td>- Could lead to excessive outflows in the future if political and economic conditions become unstable</td>
</tr>
</tbody>
</table>

Thailand: Major policy measures to manage flows

Dec 06-Feb 08
- 30% Unremunerated reserve requirements (URR)
  - Exemption extended to certain types of flows (related to trade, direct investment and public equity investment)
  - Later allowing for full hedge and natural hedge as alternatives for selected transactions.

2007-08
- Progressively relaxing on
  - FX regulations (FCD, Surrender requirement)
  - Direct investment abroad
  - Portfolio investment abroad by Thai residents

2008
- Greater policy coordination among the relevant authorities
  - Establish a joint committee on medium-term capital flow policy
  - Establish a formal coordination plan for emergency situation related to capital movements
  - Close coordination with the FPO, the PDMO and the SEC

Appropriate policy responses would depend on …

- Nature of inflows / outflows
  - Components (FDI/portfolio, equity/debt)
  - Temporary or permanent

- Reasons for the surge (domestic or external factors)

- Domestic macroeconomic and financial conditions:
  - Stage of business cycle
  - Fiscal situation
  - Current account position
  - FX regime
  - Quality of domestic financial market

- An appropriate policy response depends on each country's unique circumstances.
- No single recipe would be an optimal solution for all countries at all times.
- The authority should utilize a portfolio of policy tools to increase effectiveness.
IV. Selected policy issues:
Capital account liberalization framework
Efforts to strengthen economic resiliency against volatile flow

Debate on benefits and costs of capital account liberalization

Theoretical debate on capital account liberalization and growth

- **Neoclassical view:**
  - Free flow of capital will bring net benefits thru
  - Efficient allocation of resources
  - Consumption smoothing
  - Large welfare gain for both advanced, and especially, developing economies
  - Also, point out the micro cost of capital controls from distortions and higher cost of capital (esp. on SME)
  - Assume that imperfections can be solved away by reforms
  - Supported by Mishkin, Washington Consensus
  - Q: Is it realistic to assume that developing countries can tackle long lists of reforms at once, when even advanced nations have problem?

- **Second-Best view:**
  - Removing one distortion in the presence of other distortions may not enhance welfare
  - Gained particular relevance after the 1997 crisis, which focused attention on imperfect markets both on malfunctioning domestic financial markets in recipient countries and poor risk management in capital-exporting countries
  - Boosted further by lack of clear empirical evidences of flow benefits
  - Supported by Stiglitz, Rodrik
  - Q: Could the cost of capital capital outweigh irs benefits?
Collateral benefits

The Traditional View

A Different Perspective

Complication: Threshold Effects

How to maximize gains while containing risks?

Stepped liberalization while enhancing economic resiliency

Optimal degree of openness should increase with progress in structural and policy areas

BOT’s Guiding Principles in capital account liberalization

1. เปิดเสรีอย่างเป็นขั้นตอน (Steped Liberalization) โดยพิจารณาถึงความพร้อมด้านเศรษฐกิจและภาพรวมเศรษฐกิจสำคัญในการบริหารจัดการผลกระทบและความเสี่ยงที่อาจเกิดขึ้น
2. มีการจัดลำดับที่เหมาะสม (Proper sequencing) รวมทั้ง safeguard ที่เหมาะสม โดยเริ่มจากด้านที่มีความพร้อม ส่งผลประโยชน์ต่อเศรษฐกิจขั้นตอนและความเสี่ยงให้
3. ส่งเสริมการยกระดับความสามารถของภาคเศรษฐกิจสำคัญในการใช้ประโยชน์และบริหารจัดการความเสี่ยงจากการเปลี่ยนแปลงสถานการณ์ที่ไม่คาดคิด
4. มีระบบขั้นตอนที่มีประสิทธิภาพในการตัดสินใจและประเมินผลกระทบ ตลอดจนแผนงานเพื่อรองรับและปรับกับการเปลี่ยนแปลงที่อาจเกิดขึ้น
5. รักษาสิทธิ์ของทางการในการใช้มาตรการ Prudential ที่จำเป็นให้กระบวนการเจรจากลาการลงทุนในระยะสั้น
6. ประสานงานกับองค์กรที่เกี่ยวข้องเพื่อให้แนวทางนโยบายและการดำเนินงานมีความสอดคล้อง เป็นเอกภาพ และมีความบูรณาการ

...........ความคิดเห็นเกี่ยวกับการมีวิทยุระดับโลกที่จะเป็นผลต่อผลกระทบและความเสี่ยงที่อาจเกิดขึ้น
Recent relaxations on FX regulations

<table>
<thead>
<tr>
<th>Issuing date</th>
<th>Measures</th>
</tr>
</thead>
</table>
| Jul 24, 2007 | ▪ Extend repatriation period to 360 days (from 120 days)  
▪ Surrender requirement: the period within which exporters must sell their FC earnings is extended to 360 days (previously 15 days).  
▪ Raise the limits for deposits in FCD accounts for foreign income earners  
▪ Allow for the first time non-foreign currency earners to buy foreign currency and deposit into FCD (with limits)  
▪ Increase the limit of foreign currency that can be transferred abroad by Thai residents. |

Dec 17, 2007
▪ Remove the limit on FCDs as long as the funds are originated abroad both for individuals or juristic persons  
▪ Raise the limit on FCDs for residents with foreign currency funds originated domestically

|   | รวมถึงในกรณีที่เงินที่ได้รับมาเป็นเงินตราต่างประเทศ หรือไม่ได้รับมาเป็นเงินตราต่างประเทศ ที่มีการเก็บรักษาไว้ในตู้เซฟ หากมีการเก็บรักษาไว้ในตู้เซฟ ให้เก็บรักษาไว้ไม่เกิน 100,000 ต่อคู่ โดยไม่เกิน 1,000,000 ต่อคู่ |

Recent relaxations on outward direct investment

<table>
<thead>
<tr>
<th>Issuing date</th>
<th>Measures</th>
</tr>
</thead>
</table>
| Jan 12, 2007 | (1) Companies in general are able to invest in direct investment abroad according to the following rules:  
▪ (1.1) Thai parent company in Thailand can invest directly in subsidiary company abroad in an amount up to USD 50 Mil per year.  
▪ (1.2) Subsidiary company in Thailand can invest directly in parent company abroad in an amount up to USD 20 Mil per year  
(2) Companies registered in the main board of the stock market (SET), with positive shareholder equity as shown in the financial statement of the previous year and do not belong to the group of companies under business rehabilitation category may invest abroad up to USD 50 mil per year. |

Dec 17, 2007 | The limit in (2) above is extended to USD 100 mil per year. |

July 24, 2007 | The limit in (1.1) and (1.2) above are extended to USD 100 mil per year.  
The limit in (2) above is lifted. In addition, companies described in (2) may lend to affiliated companies abroad in an amount for each case up to USD 100 mil per year |

Recent relaxations on portfolio outflows

<table>
<thead>
<tr>
<th>Issuing Date</th>
<th>Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan 12, 2007</td>
<td>Allow institutional investors (II) to invest abroad up to $50 mil. per fund with no approval from the BOT required. If the size of investment exceeds the stated limit, II can submit the request to the BOT for approval.</td>
</tr>
<tr>
<td>Apr 1, 2007</td>
<td>The BOT approves a quota of USD 3 bil. to the SEC to be allocated to NR for issuing securities in the Thai stock market.</td>
</tr>
<tr>
<td>Aug 1, 2007</td>
<td>The BOT approves a quota of USD 10 bil. to the SEC to be allocated to securities companies, mutual fund companies, and individual investors (through investments with private funds or securities companies) for purchasing securities abroad.</td>
</tr>
<tr>
<td>March 3, 2008</td>
<td>The quota above (as of Aug 1, 2007) was raised to USD 30 bil.</td>
</tr>
</tbody>
</table>

Efforts to enhance economic resiliency against volatile flows

- Portfolio outflows
- Direct investment
- FX hedging practices
Portfolio Outflows

Based on

การลงทุนในหลักทรัพย์ต่างประเทศของไทยและผลกระทบจากการลงทุนในตลาดโลกลโดย อุบลรัตน์ จันทร์รัตน์ และ ปภาณิชี นิธิพัฒนา (2009)

แนวบายแซวสรุญกิจ-สายเนมญาการเงิน ขปท.

ช่องทางการลงทุนในหลักทรัพย์ต่างประเทศของนักลงทุนไทยในปัจจุบัน

Private Funds
Securities Companies
Mutual Funds (FIF)
Provident Funds
Social Security Fund
Govt. Pension Fund
Insurance Companies
SFI

Outflows

พระภูคำ

ยอดลงทุนในหลักทรัพย์ต่างประเทศของ
นักลงทุนสถาบันทั่วโลก

สุริยะ เดชกิจวัฒนกิจ

สรุปประเด็นสำคัญในเรื่อง Portfolio outflows

冗ข้อความ

• เงินทุนไม่ถูกยึดยับในปี 2551 แต่ยังอยู่ในระดับสูงเมื่อเทียบกับต่างประเทศ
• ส่วนใหญ่ลงทุนทั้ง FIF และ กบ. ขณะที่นักลงทุนสถาบันอื่น ๆ มีต่อหน้าจาน้าก
• ลงทุนในตราสารหนี้ที่มี rating ดี และป้องกันความเสี่ยงค่าเงินเป็นส่วนใหญ่
• มีการลงทุนในแหล่งทุนอื่น ๆ (ภาวะ ถึง 60% ของการลงทุนทั้งหมด)
• แนวทางการดำเนินนโยบาย
  • Data
  • Regulation
  • Capacity building สำหรับนักลงทุนสถาบัน
  • Financial literacy สำหรับนักลงทุนรายย่อย

ยอดลงทุนในแหล่งตลาดต่างประเทศของ
นักลงทุนสถาบันทั่วโลก

"ธนาคารแห่งประเทศไทย"
Memorandum items:

- IMFcjLPOA, GCDOus9Dissemination9Standards9Bulletin9Board, IFS9July92008

Ireland

<table>
<thead>
<tr>
<th>NAV (ลานบาท)</th>
<th>มูลค่าการลงทุนเมื่อ เกียรติ NAV (%)</th>
<th>มูลค่าการลงทุนเมื่อ เกียรติ NAV (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>กเบื.</td>
<td>ประกันสังคม</td>
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<td></td>
<td>318,861</td>
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<td></td>
<td>13.4**</td>
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<td></td>
<td>9</td>
<td>5</td>
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<tr>
<td></td>
<td>กส.</td>
<td>866,487*</td>
</tr>
<tr>
<td></td>
<td>9</td>
<td>10</td>
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</tbody>
</table>

- กองทุนรวม

- กองทุนสำรองเลี้ยงชีพ

นักลงทุนรายไตรมาส กส. ณ เดือนสัปดาห์ 2551

กิจการและวิธีการคัดเลือก  искусการลงทุนเท่ากับจุดอ่อนสินทรัพย์ที่หมด ปัจจุบัน กล.ก. กำหนดไม่เกินร้อยละ 85 ของจุดอ่อนสินทรัพย์ที่หมด

** สัดส่วนการลงทุน ณ เดือนสัปดาห์ 2551

ที่มา: กส. กล.ก. สป. และ กล.ก.

---

Portfolio Investment Asset*

<table>
<thead>
<tr>
<th>(%) ของ GDP</th>
<th>2006</th>
<th>2007</th>
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</thead>
<tbody>
<tr>
<td>Thailand</td>
<td>2.5</td>
<td>9.6</td>
</tr>
<tr>
<td>Peer group:</td>
<td></td>
<td></td>
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<tr>
<td>Malaysia</td>
<td>5.1</td>
<td>n.a.</td>
</tr>
<tr>
<td>Philippines</td>
<td>5.5</td>
<td></td>
</tr>
<tr>
<td>Korea</td>
<td>9.4</td>
<td>16.4</td>
</tr>
<tr>
<td>India</td>
<td>0.1</td>
<td>n.a.</td>
</tr>
<tr>
<td>Brazil</td>
<td>1.1</td>
<td>n.a.</td>
</tr>
<tr>
<td>Chile</td>
<td>37.9</td>
<td>51.5</td>
</tr>
<tr>
<td>Mexico</td>
<td>1.1</td>
<td>n.a.</td>
</tr>
<tr>
<td>Peru</td>
<td>9.7</td>
<td>11.0</td>
</tr>
<tr>
<td>Average</td>
<td>8.0</td>
<td>n.a.</td>
</tr>
</tbody>
</table>

Memorandum items:

- Singapore

Japan

Australia

- ตราสารที่ลงทุนส่วนใหญ่มี Credit Rating ไม่ต่ำกว่า A-

- และมีสัดส่วน hedging ratio สูง

- ตราสารที่ลงทุนส่วนใหญ่ 82% ตราสารทุน 18%

- ลงทุนต่างประเทศ


---

Portfolio Investment Outflow (Net)

- ตราสารที่ลงทุนส่วนใหญ่มี Credit Rating ไม่ต่ำกว่า A-

- และมีสัดส่วน hedging ratio สูง

- ตราสารที่ลงทุนส่วนใหญ่ 82% ตราสารทุน 18%

- ลงทุนต่างประเทศ

ที่มา: ธนาคารแห่งประเทศไทย

---

Portfolio Investment in the form of Debt securities

Portfolio Investment in the form of Equity securities

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ที่มา: ธนาคารแห่งประเทศไทย

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Portfolio Investment in the form of Debt securities

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ที่มา: ธนาคารแห่งประเทศไทย
**Conclusion: A balanced approach with good pacing and sequencing**

### Greater Financial Integration

**International and regional cooperation**

- **Capital flow policy framework**
  - Stepped liberalization
  - Invest in menu of policy option to enhance effective management of the impacts from flow procyclicality
  - Adequate reserves to instill market confidence

- **Enhance financial system resiliency**
  - Financial market deepening (institutional investors, products, governance, and literacy)
  - Effective prudential regulation and supervision
  - Quality data for better monitoring and pricing of risks

**Economic Restructuring & Inclusiveness**

- Enhancing capacity of businesses in utilizing economic integration
  - Lower market frictions, regulatory burden and monopoly
  - Benefit sharing policy including quality assistance program for affected workers and investment to improve human resources

**Sound, consistent and sustainable macroeconomic policies.**

---

**Potential topics for future research?**

**Questions:**

- What is the best way to deal with future surges of capital inflows?
- How can we protect our economy from the disturbances and disruptions that occur in international financial markets?
- Implication of increasing usage of derivatives on financial stability?
- How can we reduce the procyclicality, or the impact thereof, of capital flows?
- How can we encourage more of the type of capital flows that are best suited for the development needs of the country and how to best benefit from them?
- Impacts of greater outflows by residents on the financial markets and the economy?