Monetary Policy and Transmission Mechanism in Thailand

by
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Monetary Transmission Mechanism
- Interest Rates and Bank Lending
- Exchange Rate
- Asset Prices
- Expectations
- Relative importance of key transmission channels

Major changes influencing MP transmission since the 1997 financial crisis
- Banking disintermediation
- Excess liquidity in the Thai banking system in 2003 - 2005
Monetary Policy Transmission

Transmission channels

- Interest rates
- Bank lending
- Exchange rate
- Asset prices
- Expectation

Central bank ➔ S-T Interest Rate ➔ OMO ➔ Output and Inflation
Pass-through via interest rates and bank lending

- Policy rate to money market rates and the term structure of interest rates
- Policy rate to commercial bank rates (Deposit & MLR)
  - Dynamic Multiplier Model (DMM)
Money market rates and short-term bond yields respond quickly to and in the same direction as the current policy rate change.
Long-term bond yields depend on market expectations of future policy rate changes, but the response is also quick.
The magnification of transmission via interest rate channel could be explained by the adoption of *Inflation Targeting* that uses interest rate as the policy signal and the increased importance of bond market.
Pass-through via interest rates and bank lending

- Policy rate to money market rates and the term structure of interest rates
  - Policy rate to commercial bank rates (Deposit & MLR)
    - Dynamic Multiplier Model (DMM)
Policy retail interest rates

% p.a.

Fixed Exchange Rate Regime

Floating Exchange Rate Regime

Monetary Targeting

Inflation Targeting (RP rate as policy instrument)

Source: Bank of Thailand
Pass-through* from policy rate to retail rates

The degree of interest rate pass-through changes over time, depending to a significant extent on how well the banking sector’s intermediary role functions.

* Using the dynamic multiplier method, i.e., regressing DMLR on DRP14d (contemporaneous and lagged) and lagged DMLR with a rolling window of 50 observations.

Around 2003-2005, the weakened pass-through was partly due to excess liquidity in the banking system.
Pass-through from policy rate to retail rates

Degree of pass-through of policy rate to 3-mth deposit rate (RD3M) and MLR as estimated by the dynamic multiplier model

<table>
<thead>
<tr>
<th>Interest rates</th>
<th>Period</th>
<th>Impact</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Immediate</td>
<td>3-month</td>
<td>6-month</td>
<td>Long-run</td>
</tr>
<tr>
<td>RD3M</td>
<td>1989m1 – 1995m12</td>
<td>0.072</td>
<td>0.427</td>
<td>0.608</td>
<td>0.744</td>
</tr>
<tr>
<td></td>
<td>2000m1 – 2007m12</td>
<td>0.376</td>
<td>0.637</td>
<td>0.679</td>
<td>0.725</td>
</tr>
<tr>
<td>MLR</td>
<td>1989m1 – 1995m12</td>
<td>0.090</td>
<td>0.327</td>
<td>0.520</td>
<td>0.557</td>
</tr>
<tr>
<td></td>
<td>2000m1 – 2007m12</td>
<td>0.270</td>
<td>0.409</td>
<td>0.506</td>
<td>0.554</td>
</tr>
</tbody>
</table>

- Despite a temporary period of impaired transmission, there is evidence that the pass-through from policy rate to retail rates has picked up in the most recent years.
- There is also evidence that this transmission channel has become quicker (but not stronger as a whole) since 2000 compared to the pre-crisis period.
## International comparison of MLR pass-through

<table>
<thead>
<tr>
<th>Country</th>
<th>Impact</th>
<th>3 months</th>
<th>6 months</th>
<th>Long Run</th>
</tr>
</thead>
<tbody>
<tr>
<td>Germany</td>
<td>0.38</td>
<td>0.67</td>
<td>0.83</td>
<td>1.04</td>
</tr>
<tr>
<td>Australia</td>
<td>--</td>
<td>0.35</td>
<td>0.67</td>
<td>0.81</td>
</tr>
<tr>
<td>US</td>
<td>0.41</td>
<td>0.97</td>
<td>0.97</td>
<td>0.97</td>
</tr>
<tr>
<td>UK</td>
<td>0.82</td>
<td>1.02</td>
<td>1.04</td>
<td>1.04</td>
</tr>
<tr>
<td>Denmark</td>
<td>0.07</td>
<td>0.25</td>
<td>0.38</td>
<td>0.71</td>
</tr>
<tr>
<td>Finland</td>
<td>0.13</td>
<td>0.2</td>
<td>0.27</td>
<td>0.6</td>
</tr>
<tr>
<td>Singapore</td>
<td>0.27</td>
<td>0.71</td>
<td>0.82</td>
<td>0.95</td>
</tr>
<tr>
<td>Indonesia</td>
<td>0.2</td>
<td>0.74</td>
<td>0.74</td>
<td>1.00</td>
</tr>
<tr>
<td>Philippines</td>
<td>0.24</td>
<td>0.64</td>
<td>0.64</td>
<td>0.64</td>
</tr>
<tr>
<td>Malaysia</td>
<td>0.13</td>
<td>0.28</td>
<td>0.37</td>
<td>0.44</td>
</tr>
<tr>
<td>Japan</td>
<td>0.03</td>
<td>0.22</td>
<td>0.35</td>
<td>0.53</td>
</tr>
<tr>
<td>Thailand</td>
<td>0.27</td>
<td>0.41</td>
<td>0.51</td>
<td>0.55</td>
</tr>
</tbody>
</table>
GDP growth response to an interest rate shock according to BOTMM

Bank Lending Channel

As of Jan 2003

As of Jul 2006

Further discussion on bank lending channel in the following section
• Banking disintermediation
• Excess liquidity
Transmission from the policy rate to money market and bond yields, both short- and long-term, functions quite well. With the increased importance of the bond market, this channel has gained importance over the years.

The pass-through to commercial banks’ rates and lending, however, was temporarily impaired after the financial crisis, though it has returned to normal in the most recent years.
Exchange Rate Channel remains important

- According to econometric results, the interest rate differential is found to have a small but statistically significant effect on Thailand’s exchange rate movements*
- Nevertheless, the impact of exchange rate on the real economy is always significant.

<table>
<thead>
<tr>
<th></th>
<th>As of Jul 06</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic growth</td>
<td>+0.26</td>
</tr>
<tr>
<td>Headline inflation</td>
<td>+0.06</td>
</tr>
<tr>
<td>Core inflation</td>
<td>+0.06</td>
</tr>
</tbody>
</table>

Note: **average effect in 1 year

Note:* A 1% increase in the interest rate differential will cause the THB exchange rate to appreciate by 0.088%,

\[
D(FX) = -1.996e-06*D(BP(-1)) +0.153*D(YENDOLLAR) -0.088*INTDIFF +[AR(1)=0.426] \\
GARCH = 0.003 - 0.060*RESID(-1)^2 +1.027*GARCH(-1)
\]
Exchange Rate Channel

As of Jan 2003

As of Jul 2006

GDP growth response to an interest rate shock according to BOTMM
Asset Price Movements: House and Stock Prices

Index (Year 2000 = 100)

Source: Government Housing Bank, SET and Bank of Thailand
Asset Price Channel remains weak in Thailand

- Most of household wealth is in the form of residential and commercial real estate (non-financial assets). These assets are quite illiquid, while equity withdrawal from these assets is still limited in Thailand.
- Even financial assets held by households are mostly deposit accounts, not securities whose values are sensitive to changes in the policy interest rate.

GDP growth response to an interest rate shock according to BOTMM

Asset Price Channel

As of Jan 2003

As of Jul 2006

GDP %deviation from Baseline

Q1  Q5  Q9

All Channel
W/O Asset
Comparison Across Transmission Channels as of January 2003
Comparison Across Transmission Channels as of July 2006

- GDP %deviation from Baseline for All Channel, W/O Asset, W/O FX, W/O Banking, W/O Interest Rate

Comparison across different transmission channels as of July 2006.
Monetary policy transmission in Thailand

- Monetary policy transmission is primarily through the interest rate and exchange rate channels
- However, the sensitivity of retail interest rates to the policy interest rate was temporarily impaired after the financial crisis
- Asset price channel has yet to develop
Factors influencing the transmission channels

- Banking disintermediation
- Excess liquidity in Thai banking system during 2003 - 2005
Firms’ reliance on bank financing declined as banks’ balance sheets deteriorated and risk aversion rose significantly in 1997.

Financing Relative to GDP (1960-2005)

Percent of GDP

Note: Commercial banks, finance companies and credit foncier companies and SFIs (total assets); stocks (SET market capitalization); bonds (outstanding values of public and corporate bonds at par value)

Sources: BOT; SET; TBDC
A more limited role of bank lending

- The ratio of bank credits to GDP has fallen since the financial crisis, confirming a significant degree of ‘disintermediation’.
- The recovery in GDP has not been accompanied by a comparable bank credit expansion.

Source: BOT, NESDB
A more limited role of bank lending

Bond and equity markets have become important alternative sources of financing for large firms.
Factors influencing the transmission channels

- Banking disintermediation
- Excess liquidity in Thai banking system during 2003 - 2005
Transmission through R/P on the asset side of a bank’s balance sheet is less effective

\[ \text{MLR} = \text{Cost of funding} + \text{spread} \]

\[ \text{Deposits} \quad \text{R/P} \]

\[ \text{Returns} \]

\[ \text{Unusually low rate} \]

\[ \text{Net R/P Lending of Banks} \]

\[ \text{Billion baht} \]

\[ \text{1994} \quad \text{1995} \quad \text{1996} \quad \text{1997} \quad \text{1998} \quad \text{1999} \quad \text{2000} \quad \text{2001} \quad \text{2002} \quad \text{2003} \quad \text{2004} \quad \text{2005} \]
Conceptual Framework

- Based on specifying the proportion of “disposable liquidity” as “excess”
- Disposable liquidity includes public-sector securities, net foreign asset (NFA), and net lending in R/P

Disposable Liquidity

Source: BOT calculation
The dynamic process is based on the relative risk-return profile of each asset. For example, an asset is considered “excess” if the risk-adjusted returns are low relative to other assets such as loans. However, as its relative returns rise, banks will be more willing to hold, and it will become less “excess”.

Conceptual Framework (cont.)
Relative Returns: returns on liquid assets have risen higher compared with deposit and lending rates...

Relative Returns of Liquid Assets to Loan

Deposit rates of 4 large banks

... resulting in higher demand for liquidity (i.e. more willing to hold liquid assets like R/P)
Thus, “excess liquidity” decreased from around 15% of deposits at the beginning of the tightening cycle to around 6% of deposits.