

FN 211

Central Bank and Monetary Policy

Chotima Sitthichaiviset

Outline

I. Roles of Central Bank and Monetary Policy

II. Overview of Monetary Policy Frameworks

III. Flexible Inflation Targeting in Thailand

IV. Transmission Mechanism of Monetary Policy

Major central banks – Why financial markets around the world have to pay attention to their actions?



EUROPEAN CENTRAL BANK

EUROSYSTEM

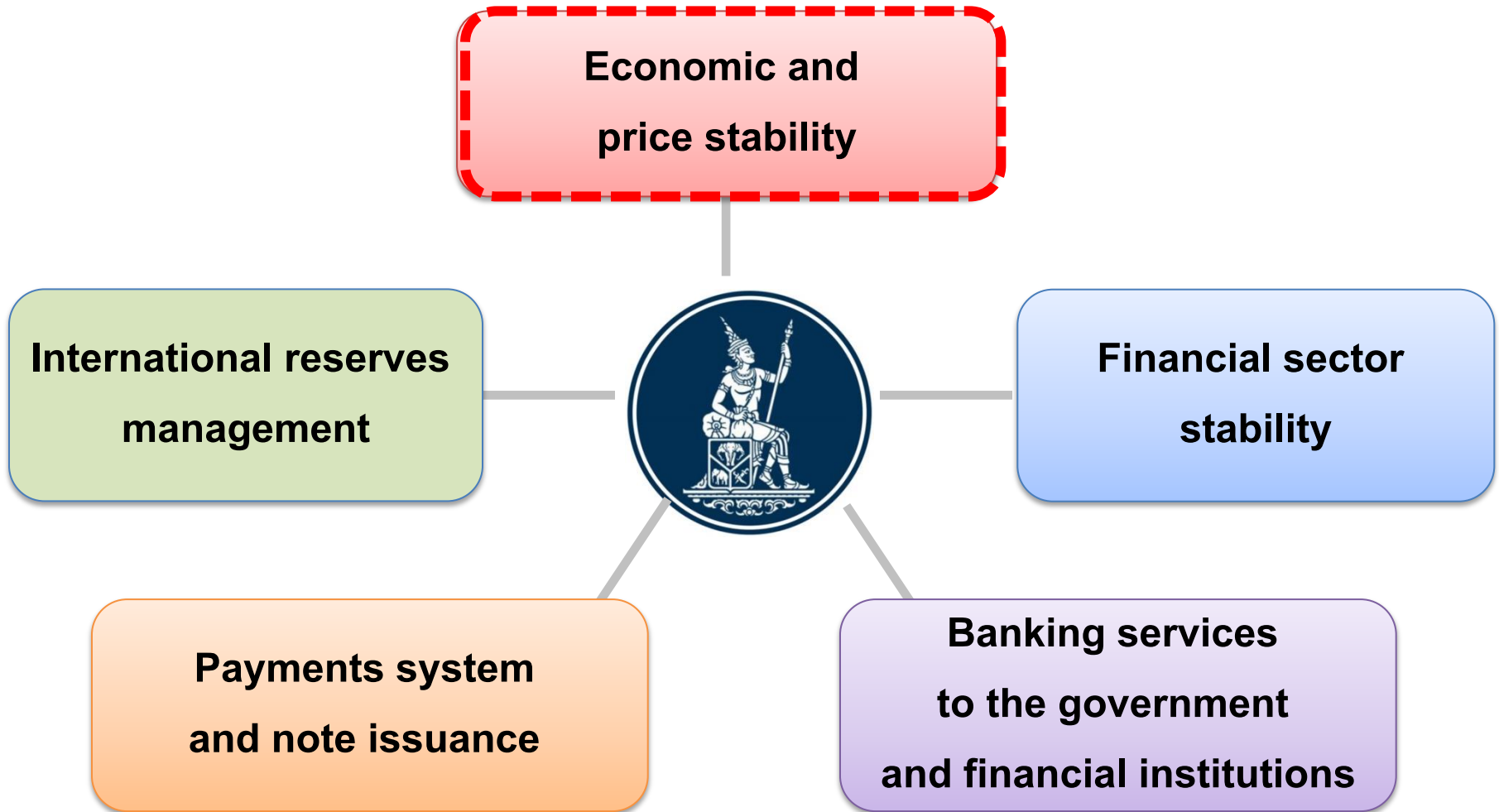


BANK OF JAPAN



中国人民银行
THE PEOPLE'S BANK OF CHINA

Roles of Central Bank



What's happened when the central banks failed to control price stability?



Germany (1922-1923)

Date:	German Marks needed to buy one ounce of gold
Jan 1919.....	170.00
Sept 1919.....	499.00
Jan 1920.....	1,340.00
Sept 1920.....	1,201.00
Jan 1921.....	1,349.00
Sept 1921.....	2,175.00
Jan 1922.....	3,976.00
Sept 1922.....	30,381.00
Jan 1923.....	372,477.00
Sept 1923.....	269,439,000.00
Oct 2, 1923.....	6,631,749,000.00
Oct 9, 1923.....	24,868,950,000.00
Oct 16, 1923.....	84,969,072,000.00
Oct 23, 1923.....	1,160,552,882,000.00
Oct 30, 1923.....	1,347,070,000,000.00
Nov 5, 1923.....	8,700,000,000,000.00
Nov 30, 1923.....	87,000,000,000,000.00



Hungary (1946)

Objectives of Monetary Policy



- Price stability is defined as “*low and stable inflation*”.
- Roles of price stability:
 - Preserves consumers’ purchasing power
 - Supports export competitiveness
 - Encourages long-term consumption, production and investment planning
- Price stability is a crucial prerequisite to *long-term sustainable growth*.

Objectives of Monetary Policy

- Apart from “Price Stability” what are other goals of monetary policy?
 - High employment
 - Economic growth
 - Stability in foreign exchange market
 - Stability of financial markets
 - Interest rate stability
- Do these goals conflict each other?
- What will happen if the economy has a **deflation**?

Price Stability Goal and the Nominal Anchor

- Policymakers must establish a **nominal anchor** which defines **price stability**.
 - For example, “maintaining an inflation rate between 2% and 4%”
- A nominal anchor helps **avoid short-run decisions** and thus **avoid the time-inconsistency problem**.
- The **time-inconsistency problem** is the idea that day-by-day policy decisions lead to poor long-run outcomes.
 - Policymakers are tempted in the *short-run* to pursue expansionary policies to boost output.
 - Central banks will have better inflation control by avoiding surprise expansionary policies.



Limitations of Monetary Policy

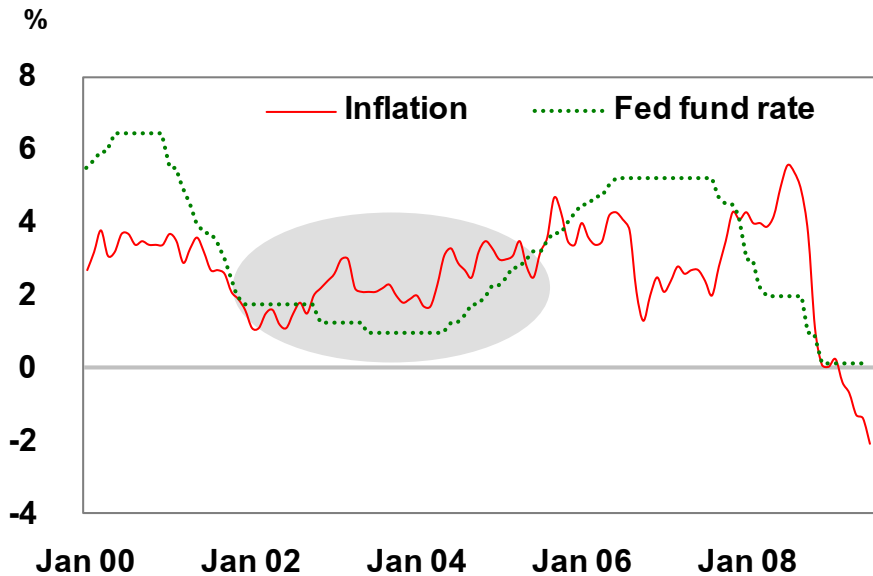
1. Central bank cannot lift up **potential growth**.

- In the *long-run*, economic growth is driven by supply-side factors, such as **productivity**.
- Then who?
- But a central bank can help facilitate productivity upgrading by promoting a more efficient and inclusive financial system.

2. **Financial instability** can build up in the absence of inflation

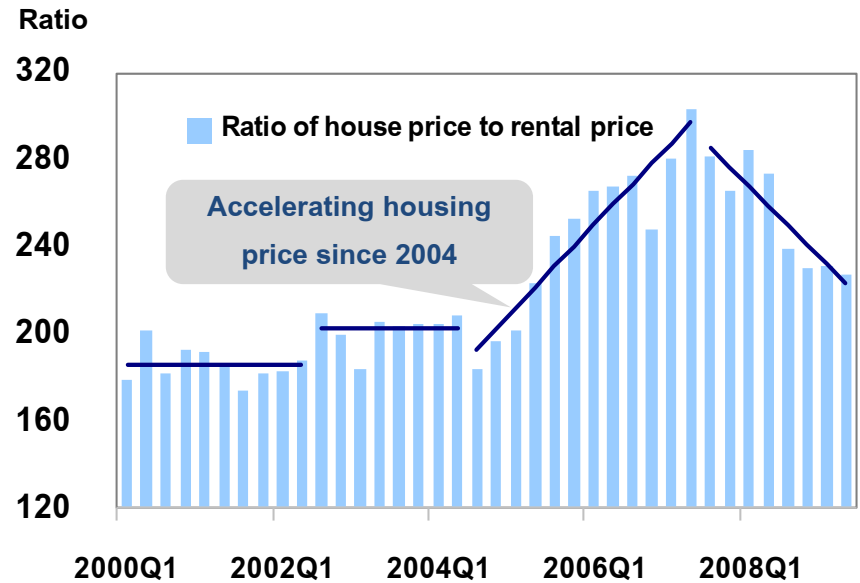
- Interest rate is an important tool but may not always be the most suitable one to curb **asset price bubbles**.
- Thus, a central bank needs a complementary set of tools to safeguard economic stability

Limitations of Monetary Policy: Housing price bubble in the U.S.



Source: Bloomberg

Note: Since 16 Dec 08, Fed announced FFR Target Range of 0-0.25%



Source: CEIC, median values

Outline

I. Roles of Central Bank and Monetary Policy

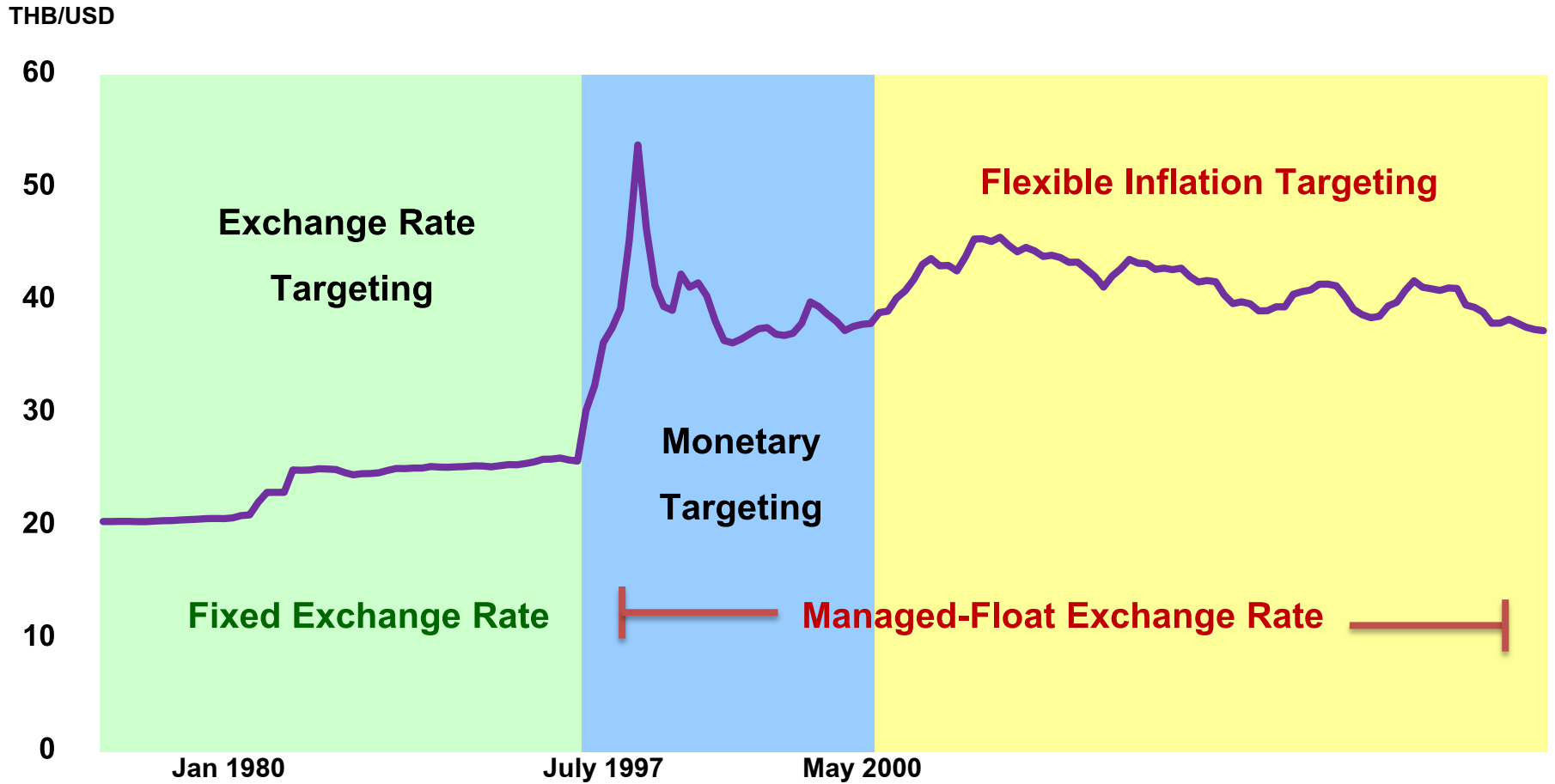
II. Overview of Monetary Policy Frameworks

1. Monetary Targeting
2. Exchange Rate Targeting
3. Inflation Targeting
4. Other regimes

III. Flexible Inflation Targeting in Thailand

IV. Transmission Mechanism of Monetary Policy

Evolution of Monetary Policy Framework in Thailand



1. Monetary Targeting Regime

Rationale

- In the long term, **price growth** is affected by money supply (Milton Friedman).

Nominal anchor

- **Targeted growth rate of a chosen monetary aggregate**

Pros

- Central bank has ultimate control of the target since it is a monopoly supplier of money supply
- Monetary policy independence

Cons

- Relies on the relationship between money supply and the economy, which is uncertain and difficult to forecast
- Difficult to communicate with the public

Example

- Germany (1970's), Thailand (1997-2000)

2. Exchange Rate Targeting Regime

Rationale

- To cushion against the **external demand shocks** for a small open economy that is heavily dependent on international trade

Nominal anchor

- **Targeted exchange rate value or band** against a reference currency or a basket of currencies

Pros

- **Stable environment for trade and investment (stable export and import prices)**
- **Stable international capital flows (domestic interest rate is in line with international interest rate)**

Cons

- **May lead to currency speculation**
- **Under free capital mobility, no monetary policy independence**

Example

- **Hong Kong, China, Singapore, Thailand (before 1997)**

3. Inflation Targeting Regime

Rationale

- central bank announces inflation as the target and changes the **policy interest rate** to maintain inflation within the specified target

Nominal anchor

- **Inflation expectation**

Characteristics

- Set numerical inflation target and clear policy signal
- Transparency and accountability
- Forward-looking policy

Pros

- Simplicity and clarity of the target
- Easily understood by the public

Cons

- Long policy transmission lag
- Potential for output fluctuations in *short-term*

Example

- New Zealand, UK, Thailand (since 2000), etc.

Main features of Inflation Targeting

1. Announcement of numerical target and policy interest rate

- Set a **numerical inflation target** and announce it to the public ahead of time **to anchor inflation expectation**, which will have an impact on actual inflation outturn
- State clearly the **policy interest rate** to enhance the **clarity of policy signal**

2. Transparency and accountability

- Regularly **communicate** with the public in a timely manner
- Publish forecasts and underlying assumptions
- Demand **accountability** from the central bank in case the inflation target cannot be delivered

3. Forward-looking

- Involve the development of **forecasting tools** due to long and variable **lag of monetary policy transmission**

Other regimes

- The **European Central Bank (ECB)** uses a *hierarchical objective*, placing the goal of price stability *above* all other goals.
 - Primary objective: Price stability
 - Secondary objective: Economic growth
- The **Federal Reserves (Fed)** , in contrast, uses a *dual objective*, where “maximizing employment, stable prices, and moderate long-term interest rates” are all given equal importance.
- Certainly, they share many characteristics as inflation targeting
 - Aim is to attain price stability in the medium to long-run
 - Explicit definition of price stability (e.g. a target of 2% core PCE in the US)
 - High degree of transparency via communication with the public about policy intent, and commitment to price stability

**Irrespective of framework,
the main objective of monetary policy is price stability.**

Countries	IT	Non-IT	Monetary Policy Objectives
US		✓	Maximum employment, stable prices , and moderate long-term interest rates
UK	✓		Monetary stability (stable prices and confidence in the currency) and financial stability
Euro area		✓	Price stability
Canada	✓		Price stability
Japan		✓	Price stability
Sweden	✓		Price stability
Australia	✓		Stability of the currency of Australia; maintenance of full employment; and economic prosperity and welfare of the people
NZ	✓		Stability in the general level of prices
Korea	✓		Price stability
Indonesia	✓		Stability in the rupiah, as reflected in the inflation rate and exchange rate
Philippines	✓		Low and stable inflation
Singapore		✓	Sustained non-inflationary economic growth
HK		✓	Currency stability

Outline

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- **Monetary Policy Framework**
- **Monetary Operations**

IV. Monetary Policy Transmission Mechanism

Flexible Inflation Targeting in Thailand

Framework

Strategy

Ultimate
target

Price
stability
Sustainable
growth

Intermediate
target

Expected inflation
(Headline inflation of
2.5% +/- 1.5%
annually average)

Implementation

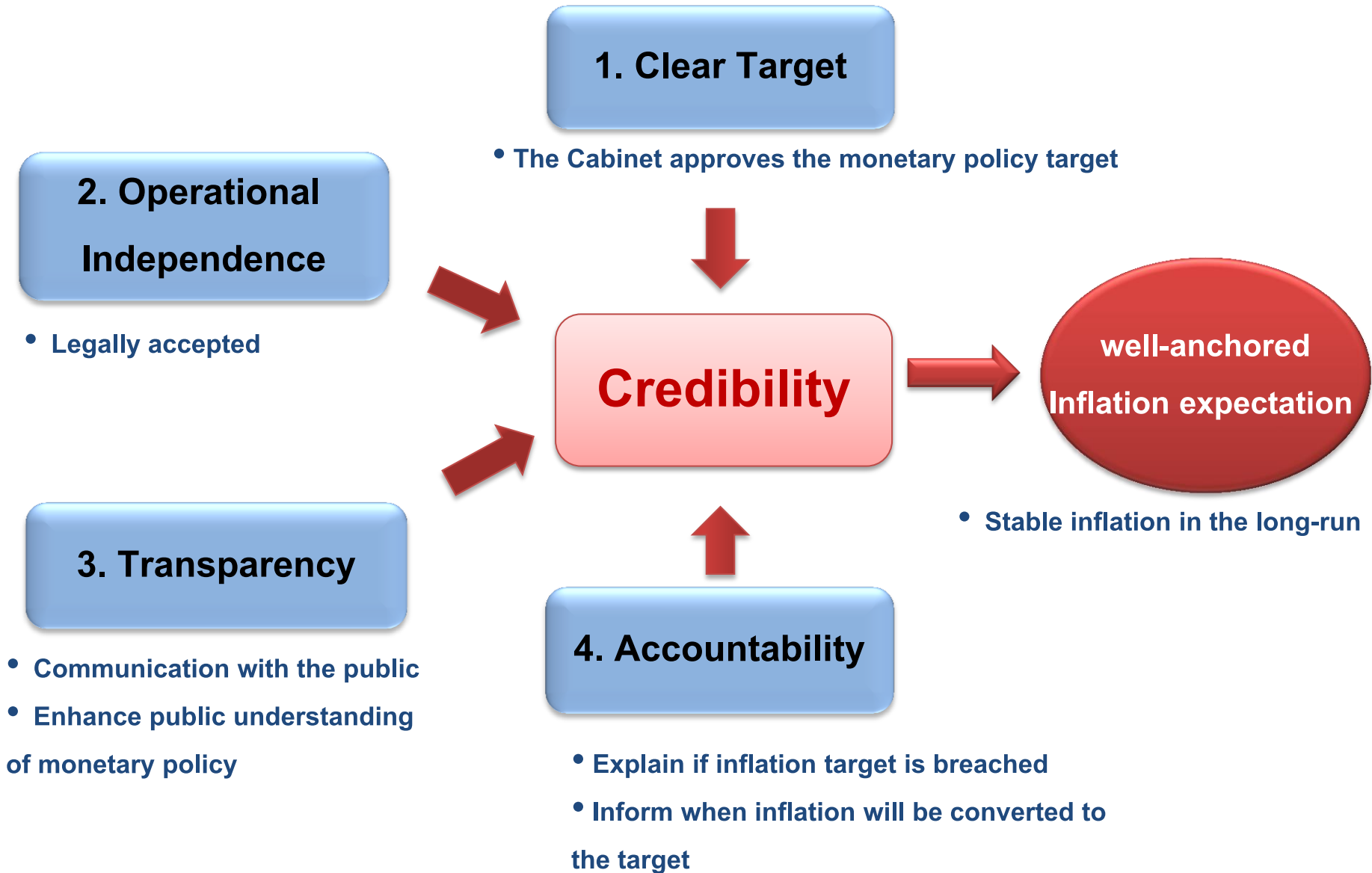
Operational
target

Policy
interest rate
(1-day RP rate)

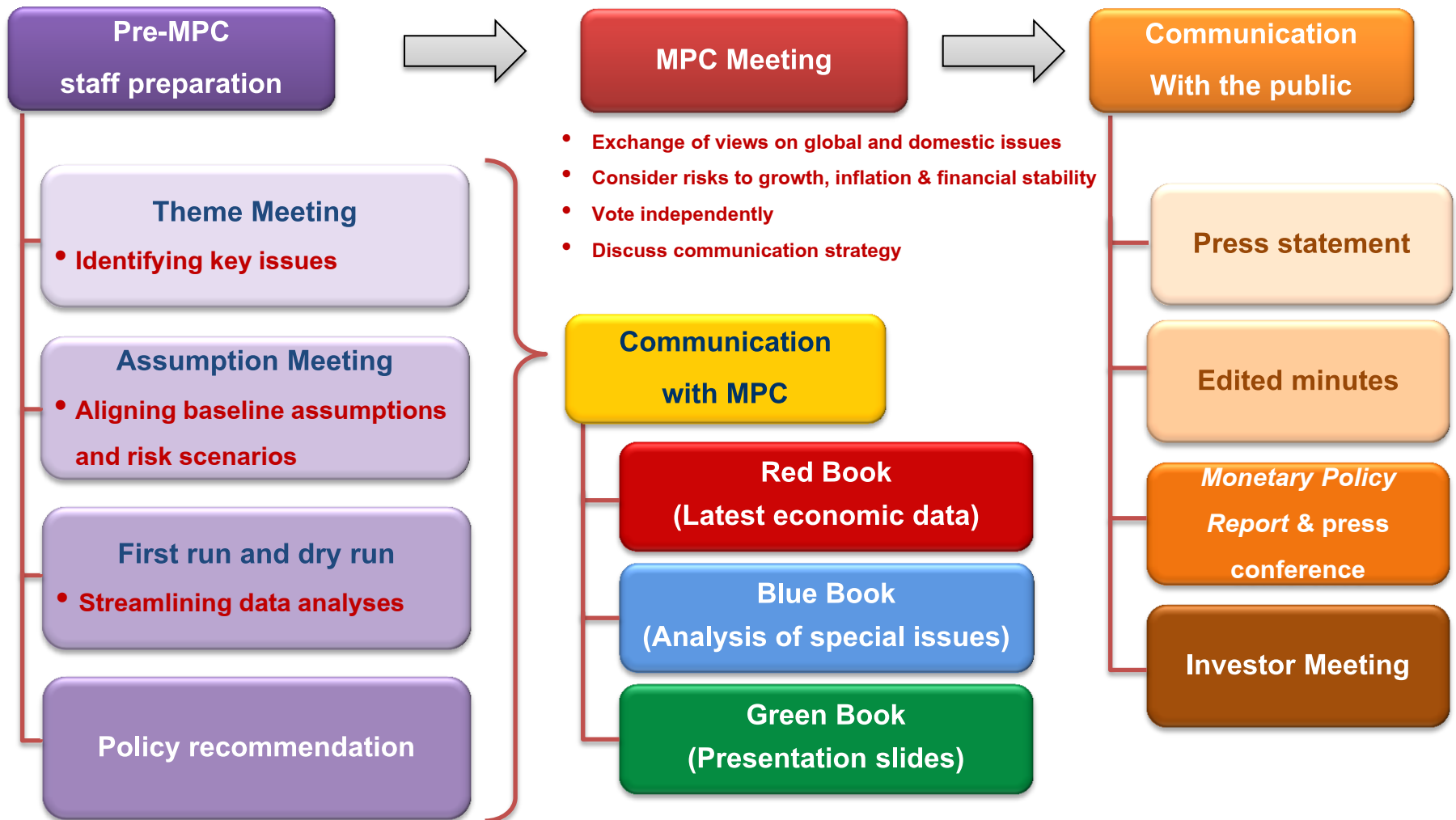
Instruments

- Reserve requirement
- Open Market Operations (OMOs)
- Standing facilities

Strengths of Inflation Targeting Framework

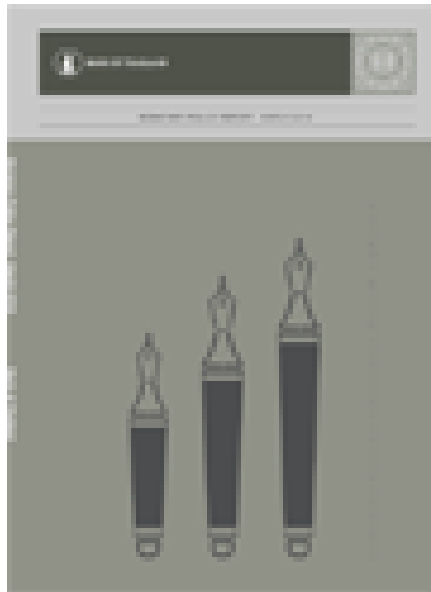


Monetary Policy Committee (MPC) Process at the BOT



Communication

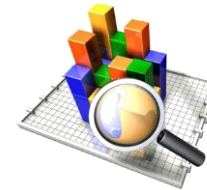
- **MPC Communication:** Press release, Edited minutes, Monetary Policy Report



Chapter 1: Growth & Inflation
Prospects

Chapter 2: Recent Economic
Developments

Chapter 3: Monetary and
Financial Stability



- **Other committees:** Financial Stability Report, Payment System Report
- **Non-MPC Communication:** Monthly releases of macroeconomic indicators, research articles, Speeches

Implementation of Monetary Policy

Framework

Strategy

Ultimate
target

Price
stability
Sustainable
growth

Intermediate
target

Expected inflation
(Headline inflation of
2.5% +/- 1.5%
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Implementation

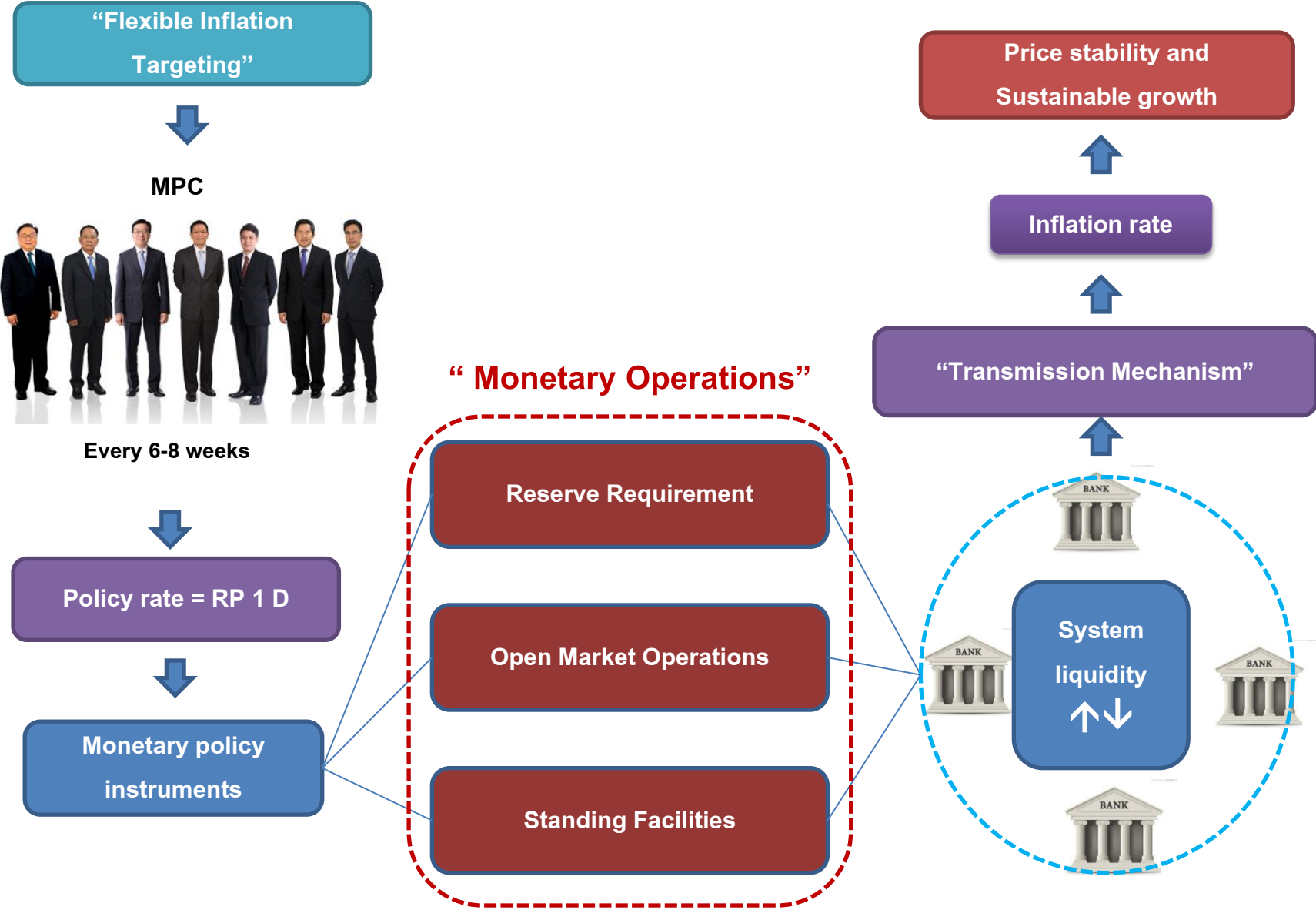
Operational
target

Policy
interest rate
(1-day Repo Rate)

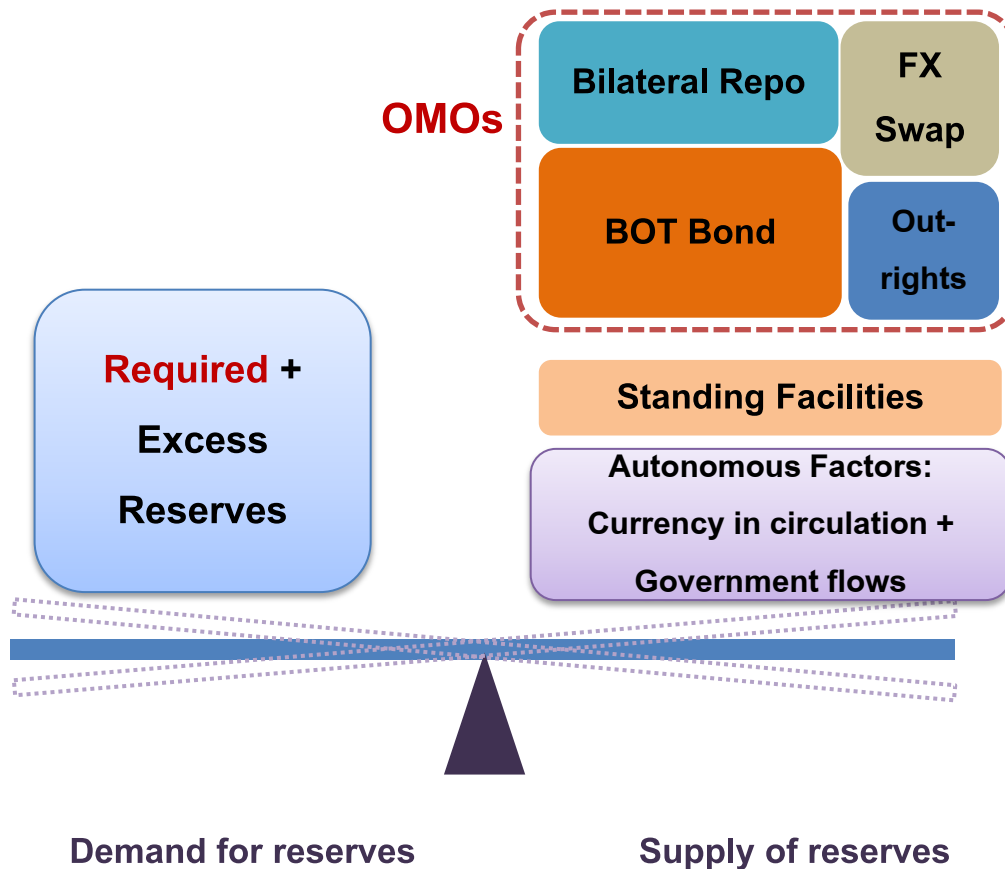
Instruments

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Process of Monetary Policy



Liquidity Management: Market for reserves



- Reserve is **cash deposits** at the central bank
- Reserves = **Required** + **Excess Reserves**
 - Excess reserve are held as a cushion to buffer against unexpected payment shocks
- Reserves held by banks are actively traded in the *interbank market*
- Central bank is a monopoly supplier of bank reserves

$$\text{Demand for reserves} = \text{Supply of reserves} + \text{OMOs} + \text{SFs}$$

Monetary Instruments

1. Reserve Requirement

2. Open Market Operations (OMOs)

2.1 Bilateral Repurchase Operations

2.2 BOT Bond Issuance

2.3 Outright Purchase/Sale of Government Securities

2.4 Foreign Exchange Swap

3. Standing Facilities

1. Reserve Requirement

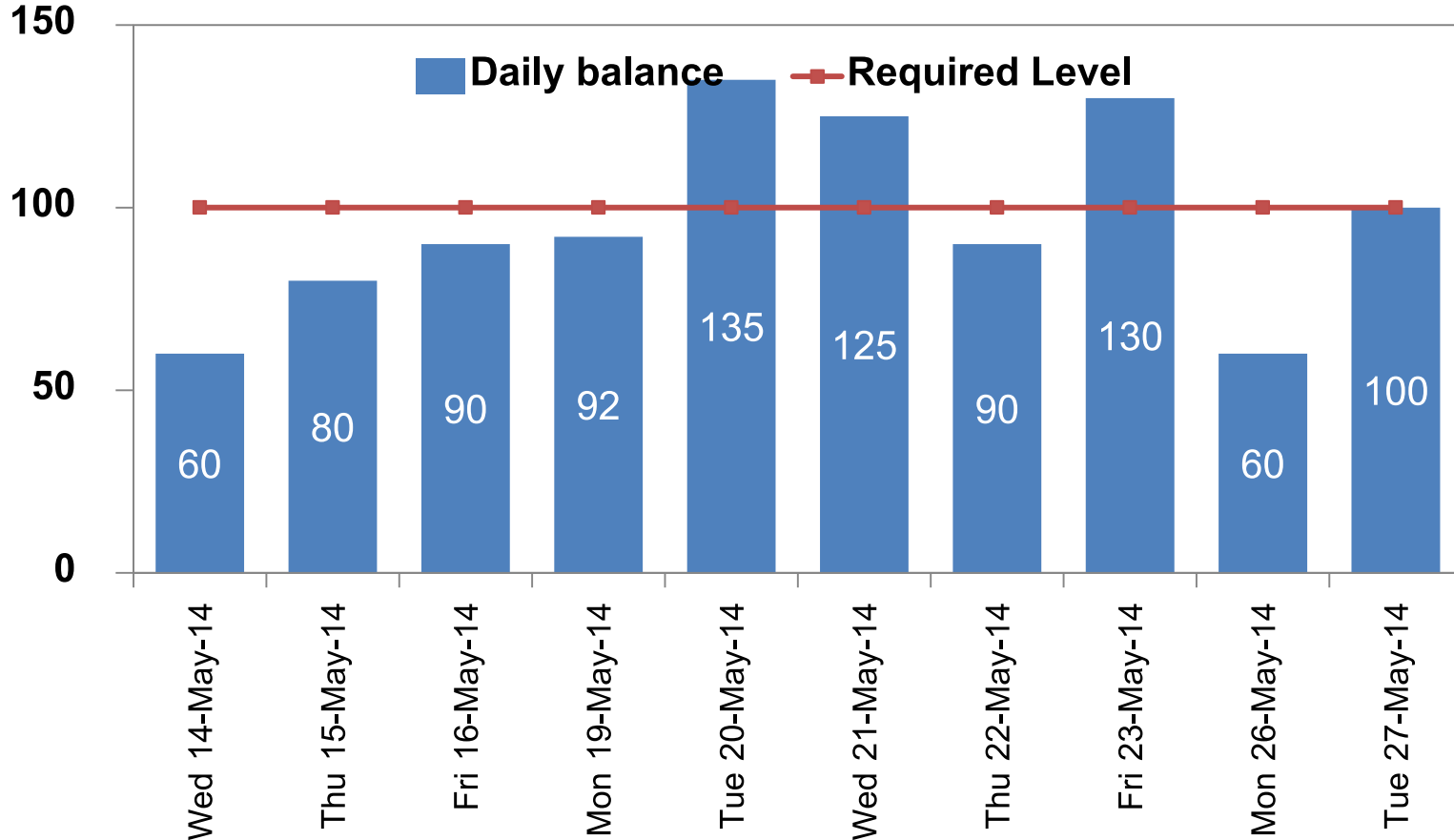
- **Objectives:** To influence demand for reserves and for commercial bank's liquidity management
- **Required reserves** are the amount of *cash* that commercial banks are required to maintain at **1% of the average level of commercial bank's liabilities base (mostly deposits)** in the previous maintenance period.

$$\frac{\text{Reserves}_t}{\text{Liabilities base}_{t-1}} \geq 1\%; \quad t = \text{Maintenance period}$$

- **Maintenance period:** Fortnightly (2 weeks), starting on a Wednesday and ending on a second Tuesday thereafter.
- **No interest payment** on the reserves

Reserve requirement: Averaging Mechanism

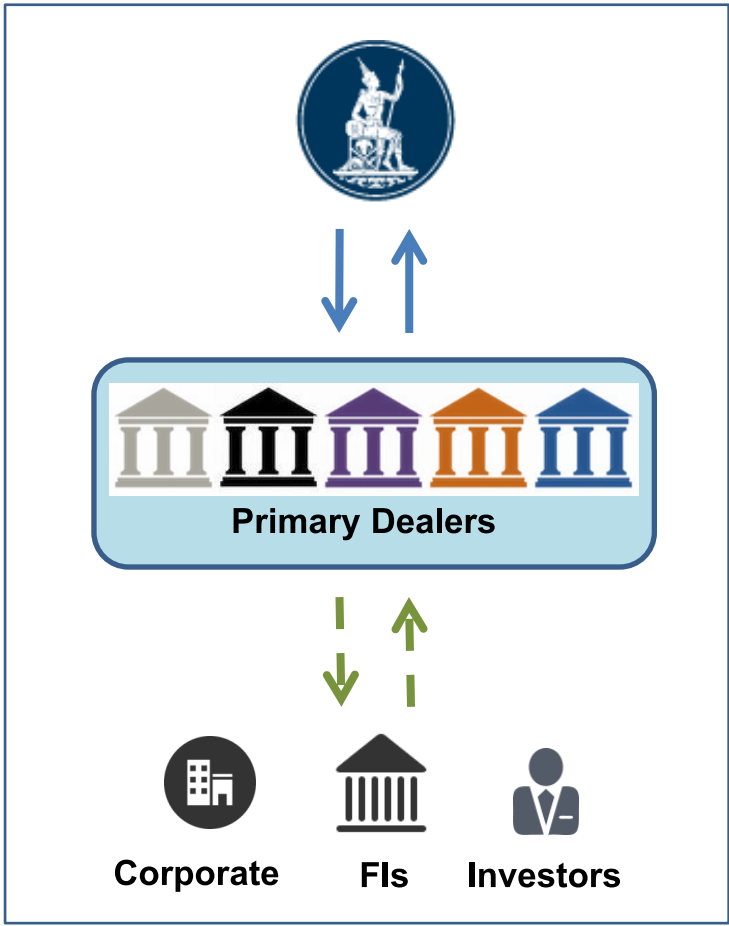
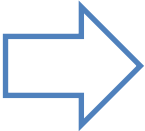
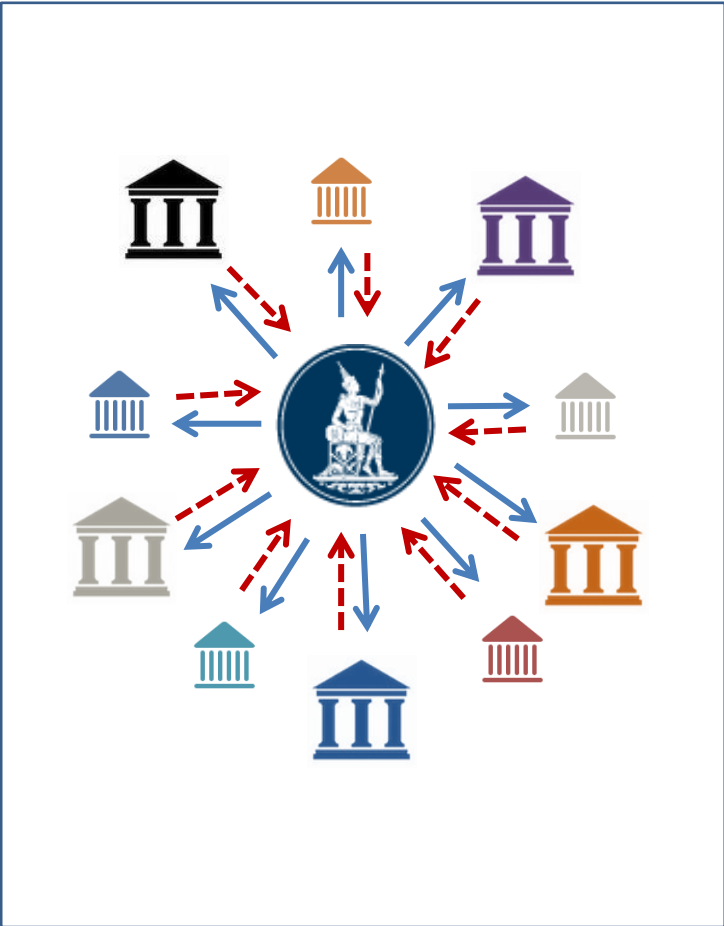
- **Averaging mechanism** helps commercial banks to easily manage their daily liquidity and thus **reduce volatility of money market rate**
- Assume Deposits = 10,000 and Reserve Requirement Ratio = 1%



2.1 Bilateral Repurchase Operation (repo)

- **Objective:**
 1. To signal the policy rate set by the Monetary Policy Committee (MPC)
 2. To foster short-term liquidity adjustment among market players
 3. To help stimulate the private repurchase market
- **Policy signals: 1-day repo rate**
 - The BOT switched policy rate from 14-day to 1-day repo rate in 2007
- **Tenors: 1-day, 7-day, 14-day, and 1-month**
- **Conducted daily**
- **Main repo operations are now conducted through a selected set of counterparty (*“Primary Dealers”*) to enhance market mechanism.**

Primary Dealers System



2.2 BOT Bond Issuance

- Objectives:
 1. To drain liquidity from the banking system in *longer-term*
 2. To help develop the Thai bond market
- BOT determines the **total issue size** and **maturity distribution** in accordance with the prevailing money market conditions and the issuance schedule of public sector debts
- There are 2 types of auctions:
 - **Competitive Bid** for commercial banks and other financial institutions
 - **Non-competitive Bid** for non-profit organizations

2.2 BOT Bond Issuance

Type	Maturity	Auction Date	Auction Frequency
Discount bills	Less than 15 days	Friday	As appropriate
	1 month	Tuesday	Occasionally
	3 month	Tuesday	Every week
	6 month	Tuesday	Every week
	1 year	Tuesday	Every month
Fixed-coupon bonds	2 year	Thursday	Every even month
	3 year	Thursday	Every odd month
Floating-rate bond	3 year	Friday	Every even month

2.3 Outright purchases/sales of government securities

- **Objective:** To *permanently* adds or drain liquidity
- BOT buys or sells public debt securities outright with the set of counterparties in *the secondary market*
- Eligible securities include all types of secured public debt securities
But BOT has primarily bought **government bonds**
- **Counterparties:** Commercial banks and other financial institutions
- Multiple-price auction
- Conducted irregularly

2.4 Foreign Exchange Swap

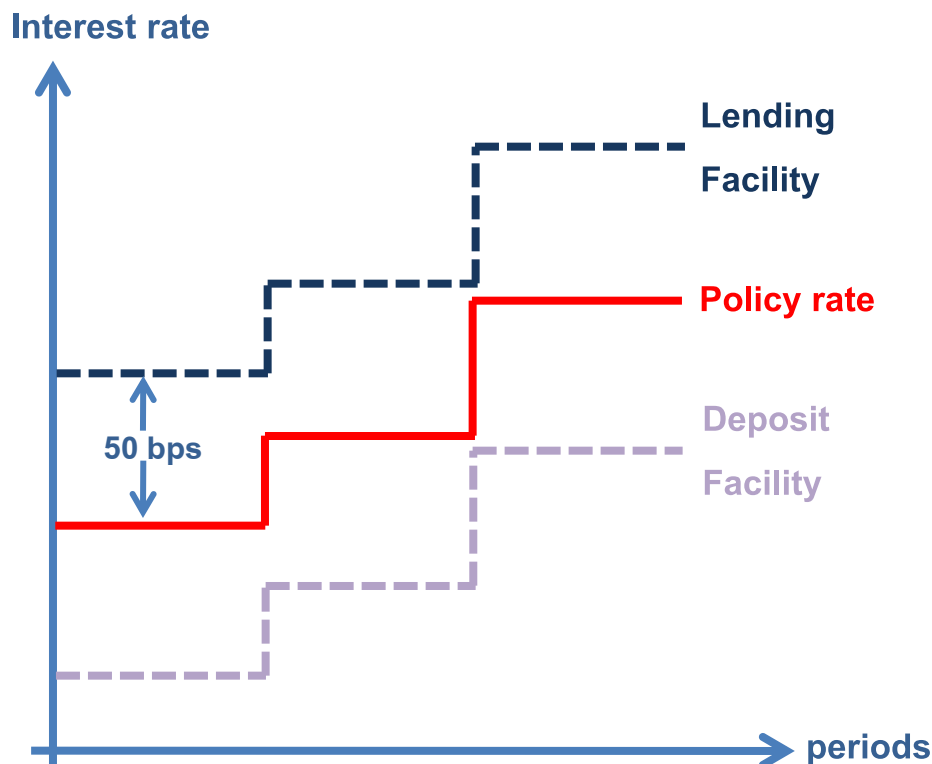
- **Objective:** To temporarily manage liquidity, especially when there is limited amount of domestic securities
- FX swap is similar to a bilateral repurchase agreement but THB is exchanged for foreign currency, namely the US dollar, rather than domestic securities
- **Counterparties:** onshore and offshore commercial banks
- **Tenors:** overnight up to 1 year, but more actively concentrated on 1 to 6-month tenor
- Conducted irregularly, depending on the FX market condition

3. Standing facilities

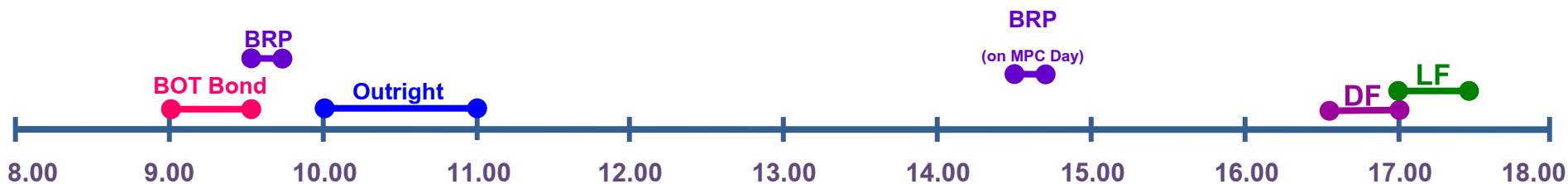
- **Objective:** To form an **interest rate corridor** which effectively sets boundaries for short term market rates and thus help contain volatility of short-term interest rates
- **Lending facility:** Financial institutions with **insufficient liquidity** can borrow funds (with collateral posted) overnight and get charged at the **policy rate plus a margin.**
- **Deposit facility:** Financial institutions with **excess liquidity** can deposit funds overnight and get paid at the **policy rate minus a margin.**
- **Counterparties:** Financial institutions who have a current account at the BOT and have applied for membership

3. Standing facilities: An interest rate corridor

- The **width of the corridor** are designed to ensure that it is sufficiently wide to encourage market participants to adjust liquidity amongst themselves while at the same time narrow enough to ensure that market interest rates will fluctuate within an acceptable range.
- Currently, the margin is set at **+/- 0.5% per annum (50 basis points)**.



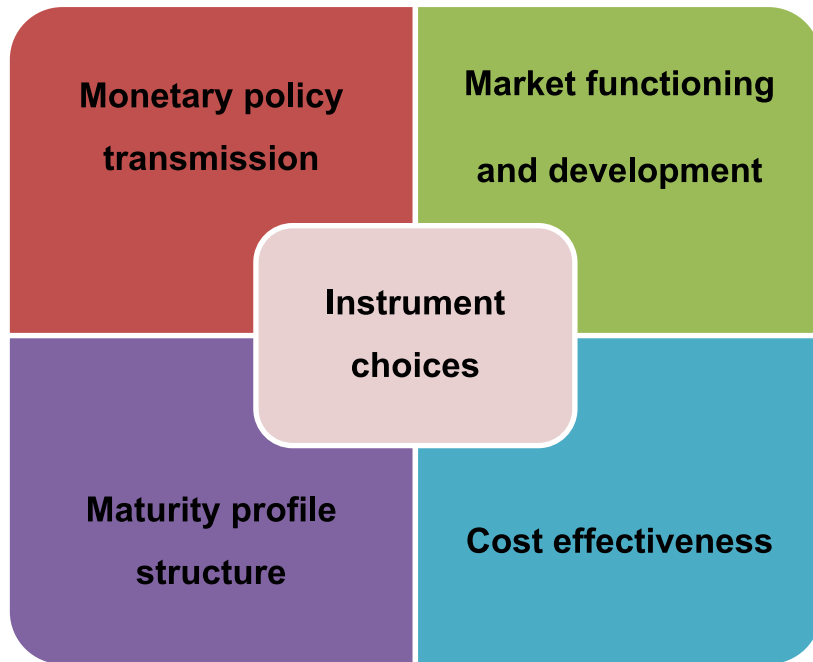
Summary of current BOT's monetary operations



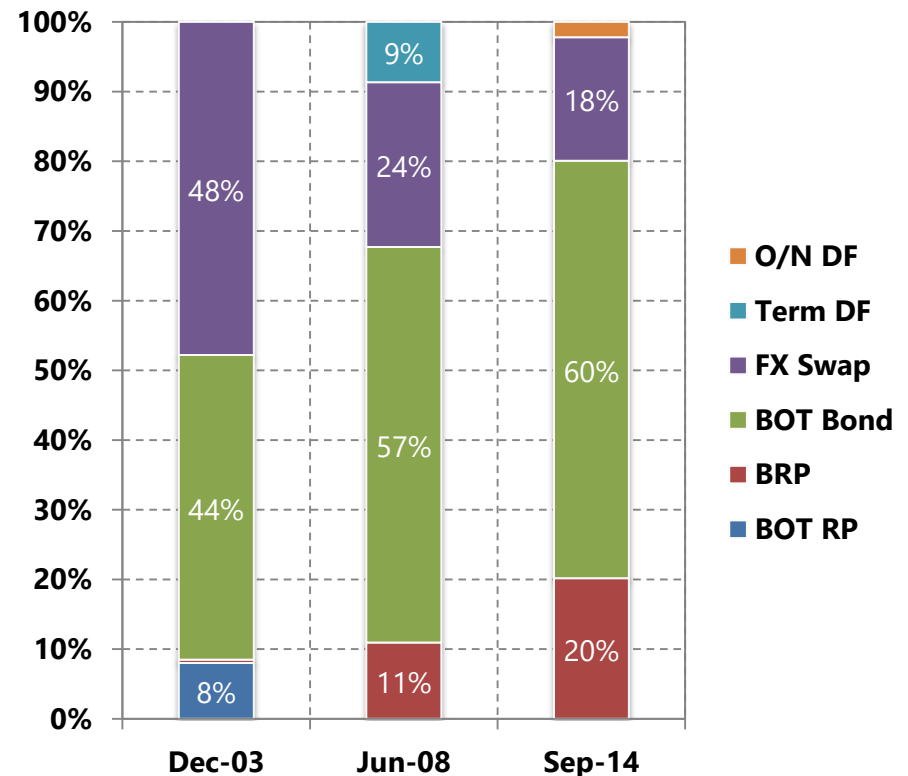
Types of Transactions	Counterparty	Frequency	Operation Time	Tenor	Auction Process
Bilateral Repo (BRP) : Morning : Afternoon : Fine-tuning	12 BRP PDs	<ul style="list-style-type: none"> Daily Daily (MPC Day) As necessary 	9.30 - 9.45 14.30-14.45 16.00-16.15	1D,7D,14D and 1M	<u>1D</u> : Fixed-rate tender > <u>1D</u> : Variable-rate tender (indexed with policy rate)
Outright	13 e-Outright CPTs	As necessary	10.00-11.00	-	Multiple-price auction
BOT Bond	~60 Eligible bidders	2-3 times a week	by 9.30	<15D 3M, 6M 1Y, 2Y, 3Y	<ul style="list-style-type: none"> Multiple-price auction Non-competitive bid
FX swap	~30 BOT Counterparities	As necessary	Office hours	1D – 12M	OTC
Deposit Facility (DF)	45 Member Fis	Daily	16.30-17.00	O/N	Policy rate – 0.5%
Lending Facility (LF)	43 Member FIs	Daily	17.00-17.30	O/N	Policy rate + 0.5%

BOT's Instrument Allocation

- BOT relies mainly on OMOs
- BOT has increasingly used BOT bonds as the main monetary instrument as the need to absorb liquidity increases

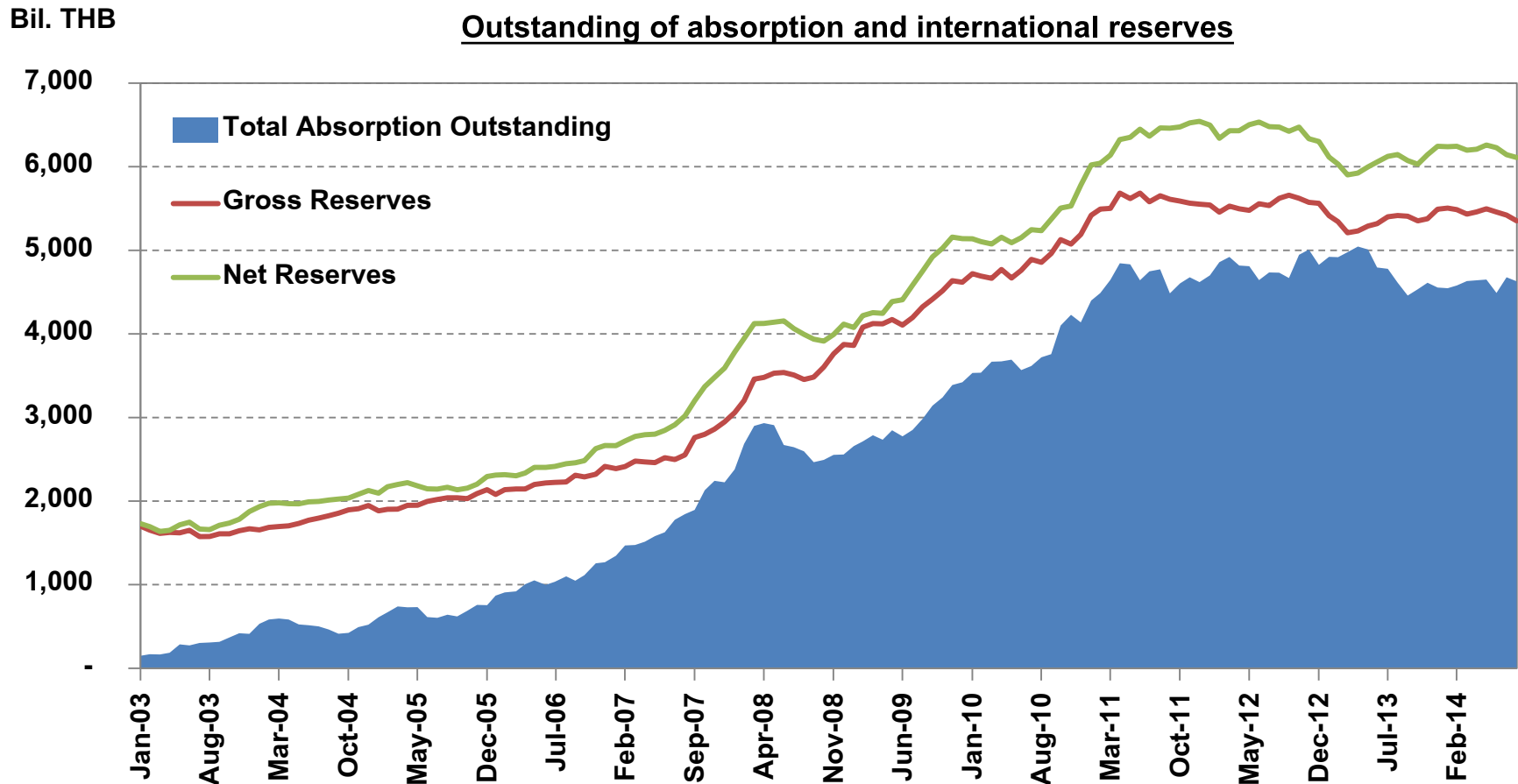


Outstanding of BOT's Monetary instruments



Structural liquidity surplus

- What are factors that cause excessive liquidity surplus in Thailand ?



Outline

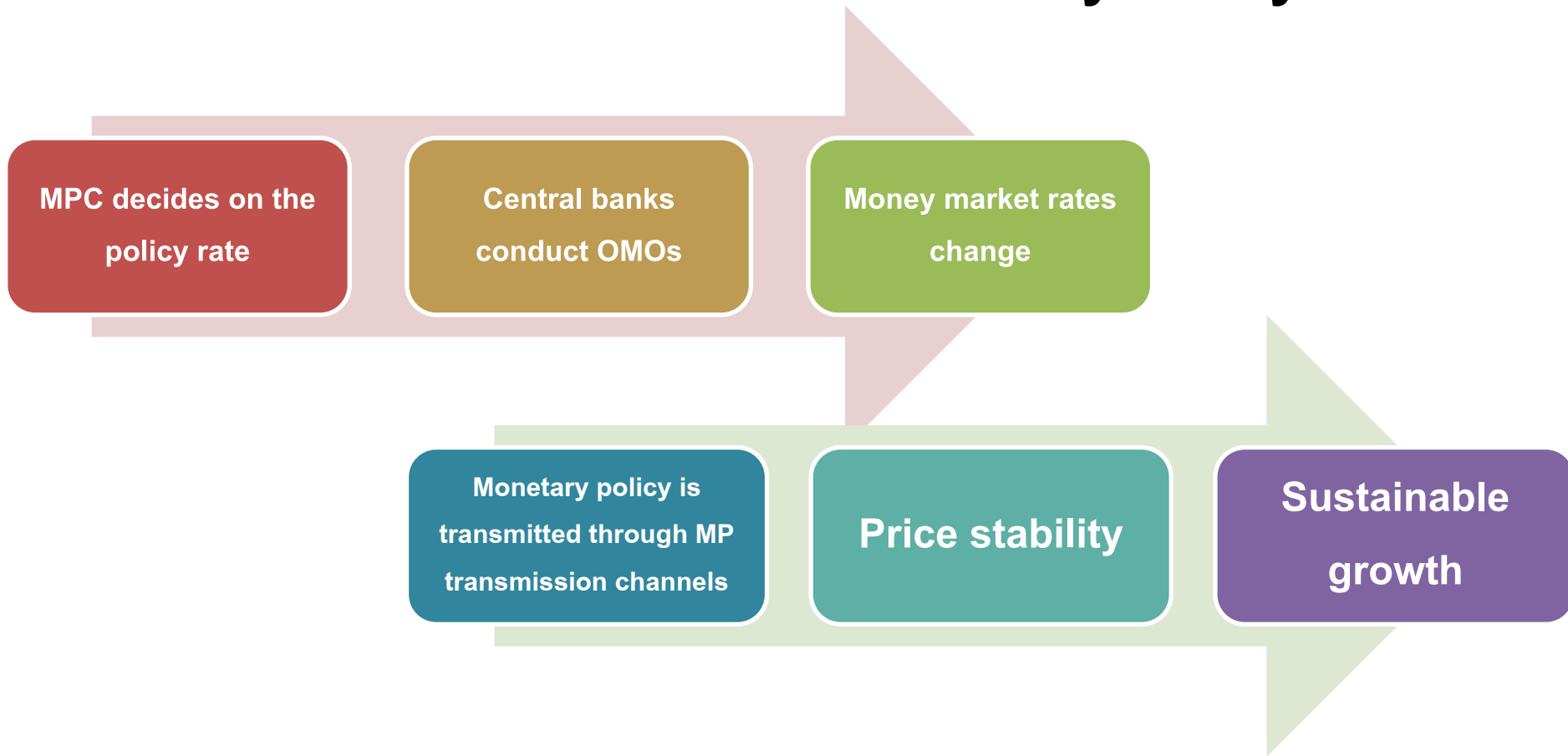
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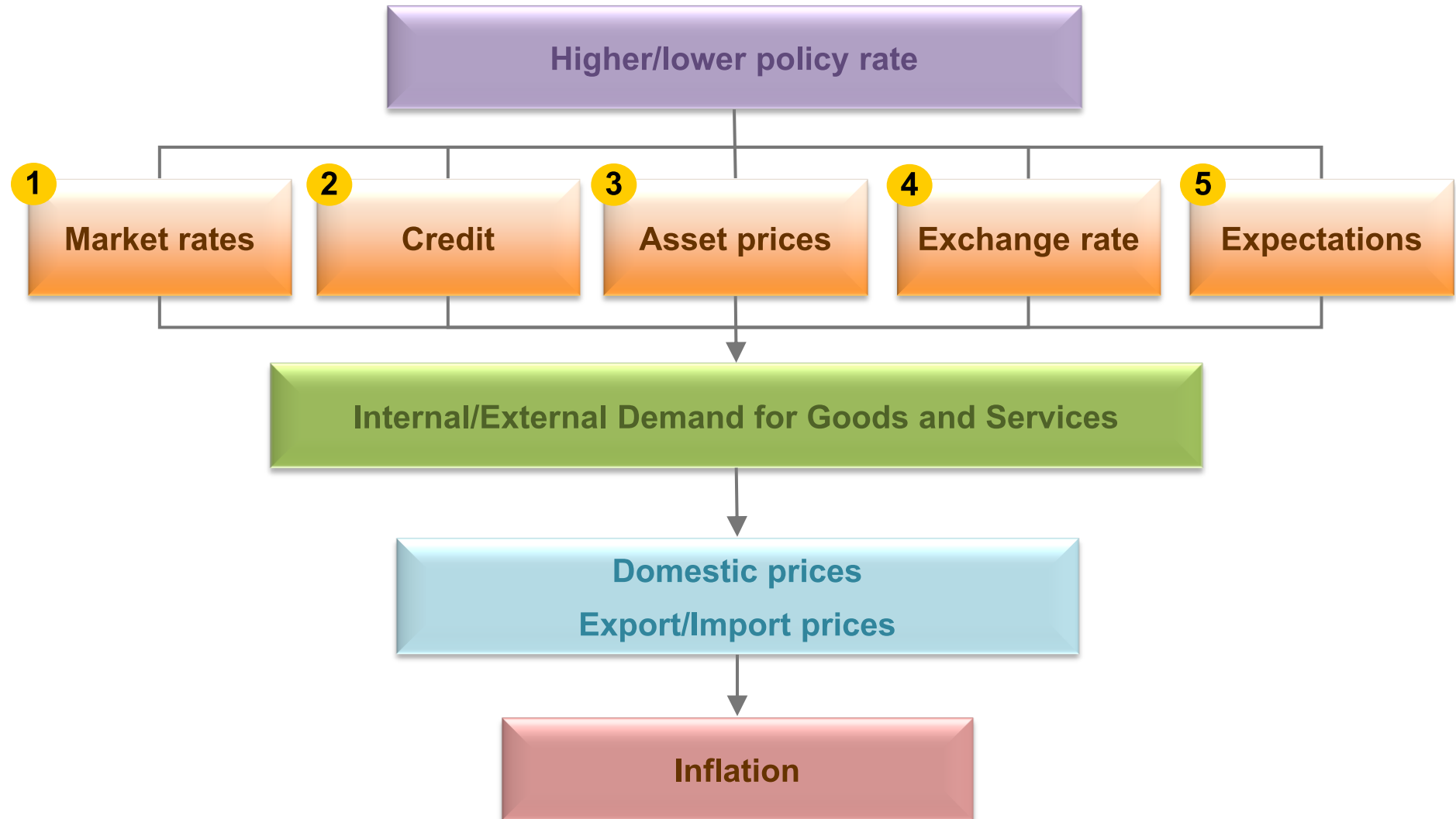
IV. Transmission Mechanism of Monetary Policy

Transmission Mechanism of Monetary Policy

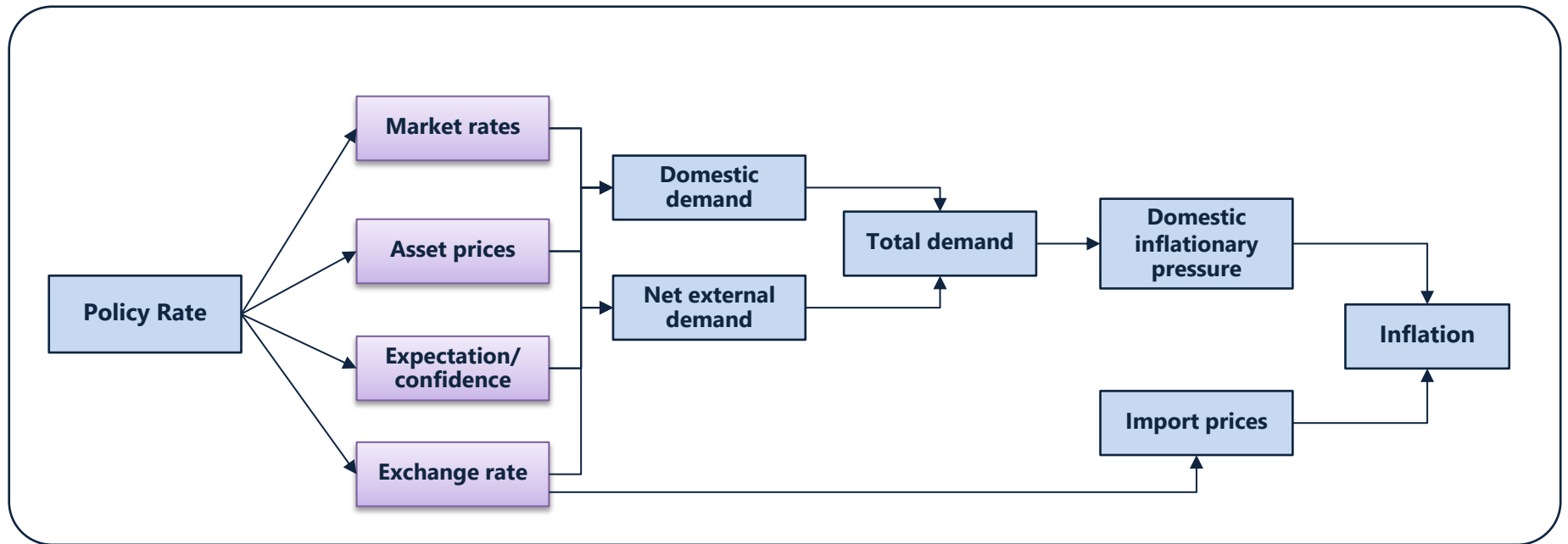


Normally, central banks will maintain short-term money market rates in line with movements in the policy rate in order **to transmit monetary policy stance** to the financial system and the economy as a whole.

Monetary Policy Transmission Channels



Transmission Mechanism of Monetary Policy



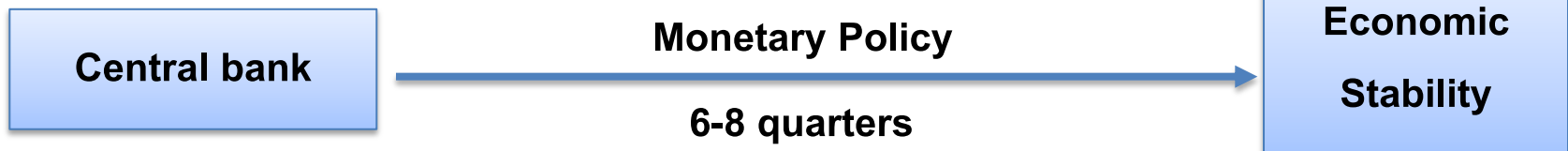
Source: The Transmission mechanism of monetary policy, BOE,

The strength of the interest rate and credit channel depends on:

- Pass-through from policy rate to money market and commercial banks' interest rates
- Degree of excess liquidity
- Degree of competition in the banking sector
- Degree of development of domestic financial markets
- Responsiveness of demand for consumption and investment to interest rates

Assessments on Transmission Channels

- Monetary policy transmission *takes time*, that is, its effect is not immediate. Thus, policy making needs to be *pre-emptive/ forward-looking*.
- The **time lags for the effect of monetary policy** on the economy may be as long as **6-8 quarters**
- The need to be pre-emptive requires the central bank to make forecasts of the economy



Movement of market interest rates

