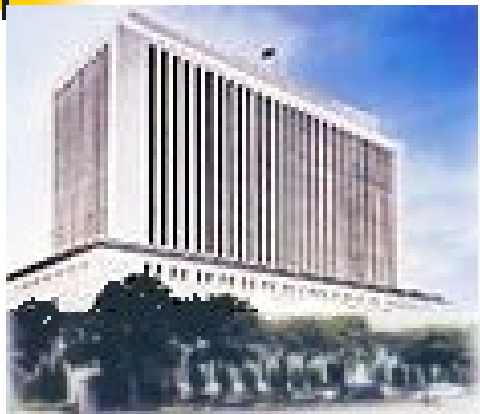


## 附錄二：參加研討會英文簡報

# Liquidity Provision and Monetary Policy



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# Outlines

- ☆ **Operational frameworks and liquidity crisis management**
- ☆ **Exceptional measures and unconventional policies**
- ☆ **Liquidity providing in case of emergency-Central bank issues**
- ☆ **Monetary policy stance and liquidity management -communication issues**





# Monetary Policy Framework

Policy  
Instruments



Operating  
Target



Intermediate  
Targets



Final  
Objectives

- Reserve Requirements
- Discount Windows
- Open Market Operations
- Financial Institution Redeposits
- Selective Credit Management

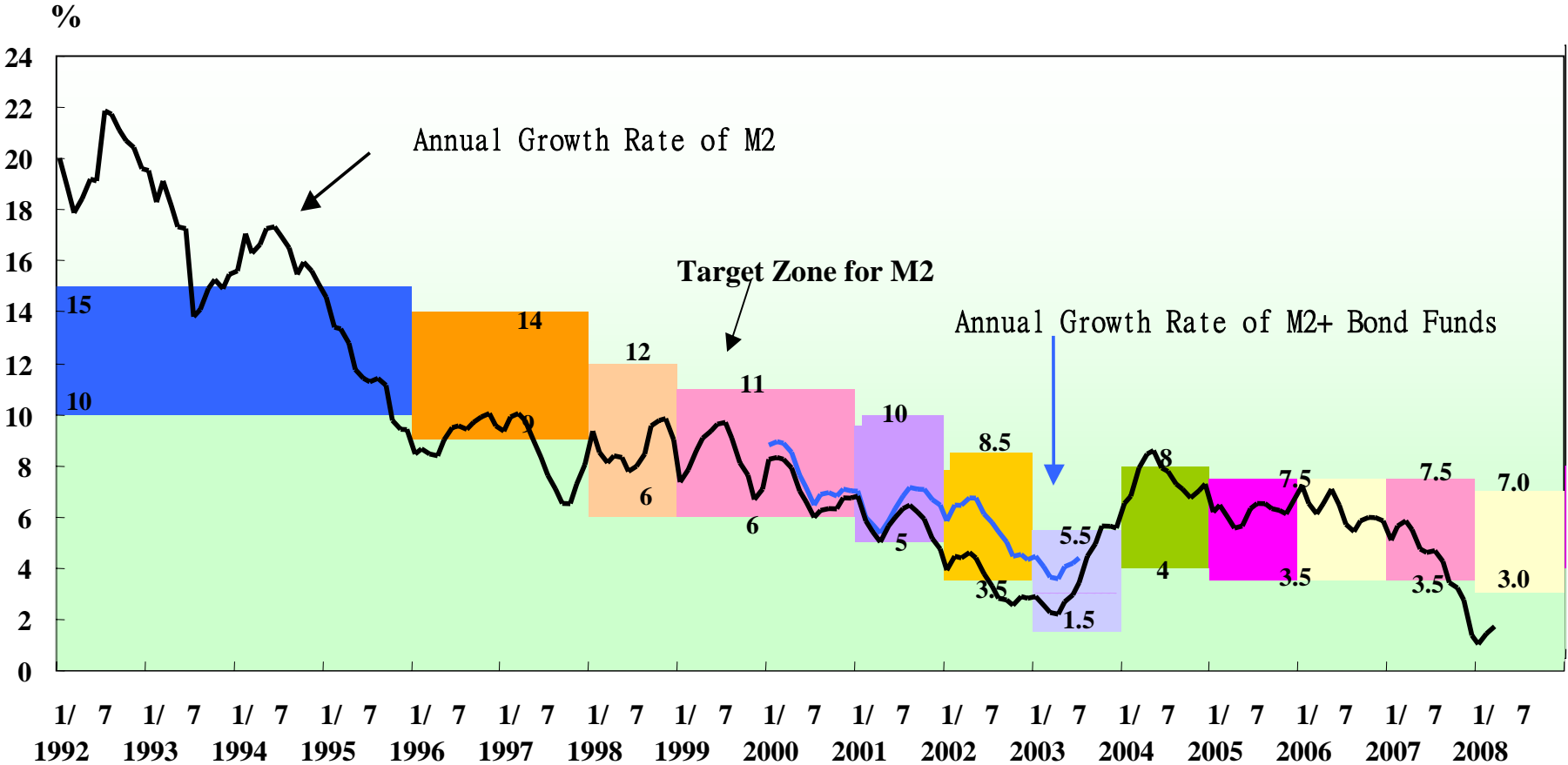
- Reserve Money

- Monetary Aggregates  
(M2, M2+Bond Funds)

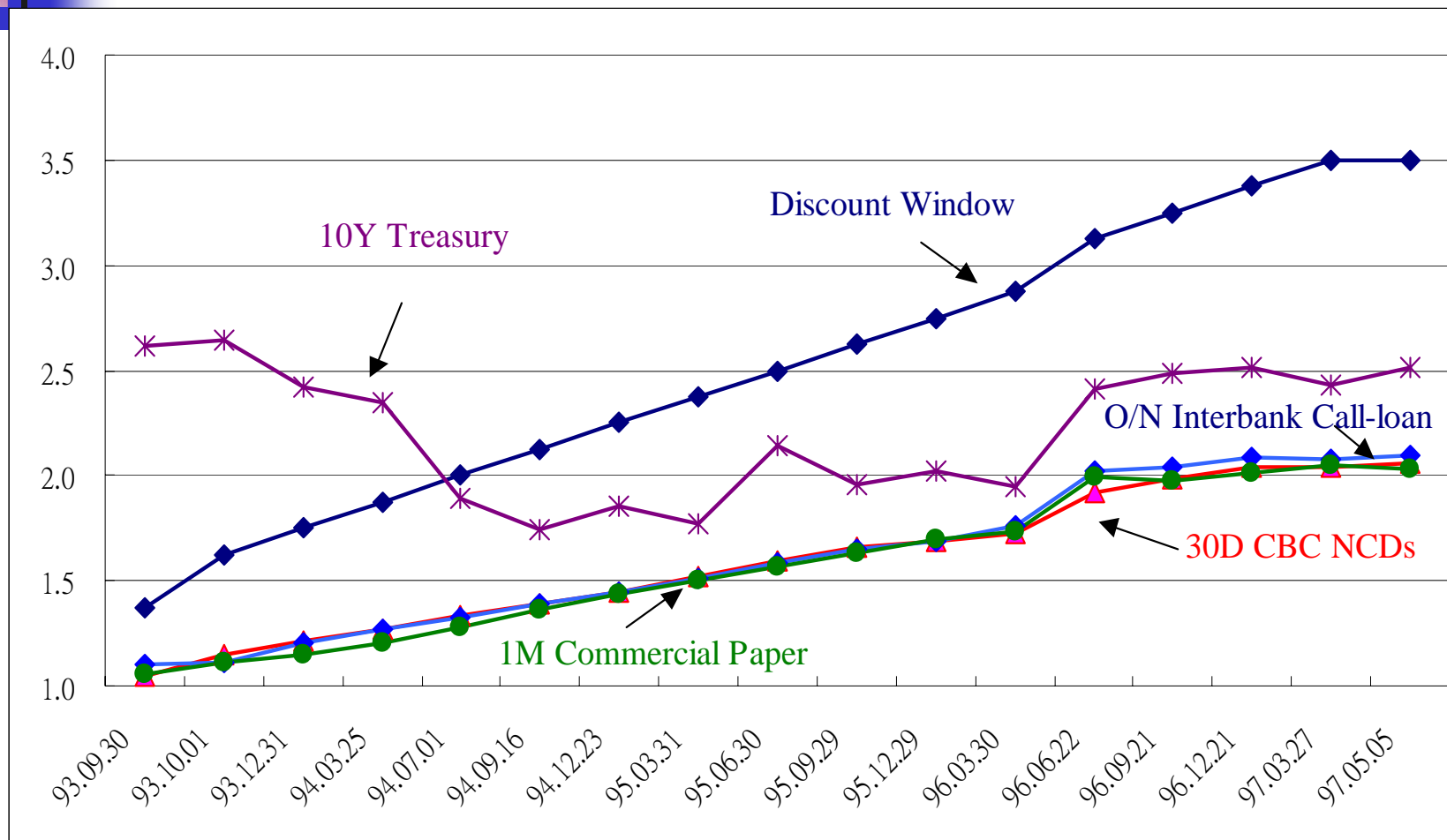
- Price Stability

- Economic Growth

# Annual Growth Rate & Target zone for M2



# CBC's Policy rates and Market rates



# Assets and Liabilities of the CBC

2008 March 31

Millions of N.T.dollars

<b>Assets</b>			<b>Liabilities &amp; Net Worth</b>		
<b>Foreign assets</b>	<b>8,896,541</b>	<b>91.08%</b>	<b>Currency issued</b>	<b>1,020,364</b>	<b>10.44%</b>
<b>Securities bought through open market operation</b>	<b>0</b>	<b>0%</b>	<b>Government deposits</b>	<b>184,706</b>	<b>1.89%</b>
<b>Claims on financial institutions</b>	<b>521,502</b>	<b>5.34%</b>	<b>Deposits of financial institutions</b>	<b>3,209,975</b>	<b>32.86%</b>
<b>Cash in vaults</b>	<b>371</b>	<b>0</b>	<b>Securities issued by CBC</b>	<b>3,939,945</b>	<b>40.34%</b>
<b>Other assets</b>	<b>349,420</b>	<b>3.58%</b>	<b>Foreign liabilities</b>	<b>19,633</b>	<b>0.2%</b>
			<b>Other liabilities</b>	<b>424,553</b>	<b>4.35%</b>
			<b>Net worth</b>	<b>968,658</b>	<b>9.92%</b>
<b>Total assets</b>	<b>9,767,834</b>	<b>100%</b>	<b>Total liabilities</b>	<b>9,767,834</b>	<b>100%</b>



# Liquidity Reserves Management

- Minimum requirement on liquidity ratio, 7%.
  - Liquid assets to liabilities should be over 7%.
- Minimum reference ratio on maturity mismatch gap within 30 days over its total asset shall be no less than -5%.
  - Maturity mismatch gap within 30 days over its total asset not less than -10% for industrial banks, while -5% for non-industrial banks.
  - The minimum ratio for maturity mismatch gap is a reference ratio for banks and will be enforced from July 1, 2008.

# Losses of Taiwan's Financial Institutions due to Sub-prime Mortgage Crisis

As the end of Feb. 2008

Unit : NT100 millions

Investment Instruments	Investment Amount	Unrealized losses		Realized Losses	Total Losses
		With Provision	Without Provision		
<b>Sub-prime mortgaged related</b>	<b>712.28</b>	<b>108.21</b>	<b>3.71</b>	<b>84.30</b>	<b>196.22</b>
<b>SIV</b>	<b>193.05</b>	<b>104.66</b>	<b>10.00</b>	<b>11.23</b>	<b>125.89</b>
<b>Banks</b>	Sub-prime mortgage	492.49	72.84	71.30	145.69
	SIV	177.97	104.06	10.85	122.28
	<b>Sum</b>	662.12	—	—	259.16
<b>Insurance Corp.</b>	Sub-prime mortgage	219.79	35.37	13.00	50.53
	SIV	15.08	0.60	0.38	3.61
<b>Sum</b>	<b>896.99</b>	<b>212.86</b>	<b>13.71</b>	<b>95.53</b>	<b>313.30*</b>

Losses account for only 0.1% of the total assets for banks and insurance corporations.



# Federal Reserve Lending Facilities

## Conventional

	<b>Counter-parties</b>	<b>Collateral</b>	<b>Term</b>	<b>Frequency</b>	<b>Cost</b>
Discount Window	Depository Institutions	Treasuries, GSE debt, Brady bonds, foreign government bonds, munis, Corporate debt, CMBS, RMBS, CMOs, mutual funds, etc.	Max of 90 days	Daily	Discount rate, currently 25 bps above Fed funds
Open Market Operations	Primary dealers	Treasuries, agencies, and agency MBS	From overnight to up to 65 days	Daily	Bid rate is generally around target Fed funds rate
Lending from System Open Market Account (SOMA)	Primary dealers	Treasury bills, notes, bonds and TIPS	Overnight loans of Treasury securities	Daily	Minimum fee bid of 50 bp

# Federal Reserve Lending Facilities

## Non-Conventional

	<b>Counter-parties</b>	<b>Collateral</b>	<b>Term</b>	<b>Frequency</b>	<b>Cost</b>
Term Auction Facility (TAF)	Depository Institutions	Same collateral and margins as discount window	28 days	Twice monthly	Minimum bid rate set according to expected Fed funds rate over term of loan.
Primary Dealer Credit Facility (PDCF)	Primary dealers	Collateral that is eligible for open market operations plus investment grade corporate bond, munis, MBS, and ABS. Must be “priceable”	Over-night	Daily	Discount rate, currently 25 bp above Fed funds
Term Securities Lending Facility (TSLF)	Primary dealers	Two schedules	28 days	Weekly	Minimum fee bid to be set by FED

# What can the CBC learn from Fed's unconventional measures

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- **TAF** : Regarding our OMO, we **can conduct Repo by auction** and widen the varieties of collateral in case it is necessary.
- **PDCF** : Regarding our Discount Window, there's **no need** to change right now, since counterparties have a lot of the CBC's NCD to conduct Repo, which is more flexible than Discount Window.
- **TSLF** : The CBC did not hold Treasuries due to sufficient liquidity status in Taiwan; therefore, we are **not able to do securities lending**.

# Key features of operating frameworks: collateral and counterparties

	EA	JP	GB	US	TW
Collateral, MOs					
Government securities	✓ <sup>1</sup>	✓	✓	✓ <sup>2</sup>	✓
Private sector securities	✓ <sup>1</sup>	✓ <sup>1,3</sup>			
FX <sup>4</sup>			✓ <sup>5</sup>		✓
Collateral, LF					
Same as MOs	✓	✓	✓		
Broader				✓ <sup>1</sup>	✓
Counterparties, MOs					
Securities firms		✓ <sup>1</sup>	✓ <sup>1,6</sup>	✓ <sup>7</sup>	✓
Banks <sup>8</sup>	✓ <sup>9</sup>	✓ <sup>1</sup>	✓ <sup>1,6,10</sup>		✓
Counterparties, LF					
Same as MOs	✓				
Broader		✓	✓	✓	
Overlap	Complete	Large	Large	Limited	✓

MOs=(discretionary) market operations; LF=marginal lending facility. <sup>1</sup> Selected. <sup>2</sup> And agencies. <sup>3</sup> As well as loan deeds. <sup>4</sup> Including FX swaps. <sup>5</sup> Euro <sup>6</sup> Active intermediaries. <sup>7</sup> Primary dealers. <sup>8</sup> The precise coverage varies somewhat from country to country. <sup>9</sup> Institutions subject to reserve requirements. <sup>10</sup> Including building societies.

Sources: BIS Quarterly Review, March 2008, Markets Committee (2007); central banks and the presenter.

# Steps Taken during the Financial Turmoil

	EA	JP	GB	US	TW
Exceptional fine-tuning (frequency, conditions)	✓	✓	✓	✓	△
Exceptional long-term open market operations	✓	✓	✓	✓	△
Change in the standing lending facility				✓	
Broadening of eligible collateral			✓	✓ <sup>1</sup>	△
Change in bank's reserve requirements/target balances			✓		△
Broadening of counterparties			✓ <sup>2</sup>	✓ <sup>1</sup>	△

<sup>1</sup> The collateral and counterparty rules did not change, but the discretionary operations under the Term Auction Facility utilize the broader lists pertaining to discount window credit compared to those for ordinary open market operations. <sup>2</sup> Only for four auctions of term funding for which, however, there were no bids.

△ Proposals for future financial turmoil, if it occurs.

Source: BIS Quarterly Review, March 2008, Central banks and the presenter.

# Liquidity-providing by the CBC (Taiwan)

## OMOs v.s. Discount Window

	OMOs (More flexible)	Discount Window
Counterparties	Banks, Bills finance companies, Securities firms, Taiwan Postal Company.	Deposit institutions, which deposit required reserves in the CBC, such as banks, Taiwan Postal Company.
Collateral	<ol style="list-style-type: none"> <li>1.The CBC's NCDs</li> <li>2.Government bonds.</li> <li>3.Financial debentures.</li> <li>4.Short-term notes guaranteed by banks.</li> </ol>	<ol style="list-style-type: none"> <li>1.Government bonds.</li> <li>2.The CBC's NCDs.</li> <li>3.Short-term notes guaranteed by banks.</li> <li>4.Reserve account B in the Central Bank.</li> </ol>
Operations	Fixed rate Repo	Ask permission from the CBC
Interest rates	The CBC set interest rate after referring to market interest rates	Same as the CBC's policy rate.
Tenors	No specified tenors, usually within few days.	<ol style="list-style-type: none"> <li>1. Discount window: less than 180 days.</li> <li>2. Accommodations with collateral: less than 10 days.</li> <li>3. Accommodations without collateral: less than 360 days.</li> </ol>



## Measures for CBC to provide liquidity

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- Reduce the **CDs/NCDs** daily issuance amount.
- Reduce the **redeposit** amount taken from financial institutions.
- Conduct **Repo** operation.
- Conduct discount **accommodation**.  
(If only a few banks needs extra liquidity, this facility will be applied first.)
- Lower the **required reserve ratios**.

## Deposit Insurance System in Taiwan

- The Central Deposit Insurance Company (CDIC) charges premium from individual institutions based on their different levels of risk in order to cover depositor's losses if banks go bankruptcy.
- The CDIC would compensate the highest amount to **NT\$ 1.5 million** for each individual in term of checking accounts, passbook deposits, time deposits and other deposits which the Financial Supervisory Commission (FSC) has approved as insurable.



# Deposit Insurance System in Taiwan



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- The premium rates usually ranged as follows:
  - Banks and credit cooperatives: Ranged from 0.03% to 0.07% of covered deposits. Insured deposits in excess of maximum coverage applied to the flat rate of 0.0025%.
  - Credit departments of farmer and fishermen's associations: Ranged from 0.02% to 0.06% of covered deposits. Insured deposits in excess of maximum coverage applied to the flat rate of 0.0025%.



## The CBC's Special Financial Accommodations to the CDIC

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- The Bank can give a special financial accommodation to the CDIC.
- The financing interest rate shall be charged at the floating **interest rate for accommodations with collateral**, as published by the Bank.
- The CDIC may provide government bonds, Certificates of Deposit of the Central Bank and other **eligible collaterals** to apply for accommodation from the Bank.
- If the accommodation exceeds the amount of collateral provided by the CDIC, the FSC, Ministry of Finance (MoF) and the Bank shall submit to the Executive Yuan for **National Treasury guarantee**.

## Foreign Currency Re-accommodations by the CBC

- Enterprises engaged in important investment involving in development of natural resources, acquisition of high technology and domestic construction investment, etc. could get US dollars financing from the authorized banks.
- The authorized banks could get re-accommodation from the Central bank.
- The total amount of the re-accommodation by the Bank **would not exceed US\$10 billion.**
- The interest rate of re-accommodation charged by the Bank would base on **the same term U.S. dollars offered rate in the domestic or foreign inter-bank market.**



## Future Work to Strengthen Liquidity Risk Management and Supervision by the CBC

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- As the BIS paper disclosed in February 2008, we need to enhance our work in the following aspects:
  - Require banks to do **stress test or scenario analyses** periodically.
  - Require banks to have **a sound and practical contingency funding plan**.
  - **Implementing different rules** for large and small banks.

## Provision of Information by Central Banks

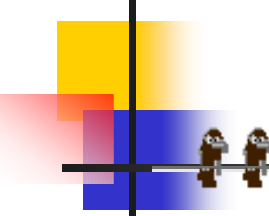
	US	ECB	JP	GB	TW
<b>Accountability</b>					
1.Quantitative inflation objectives	No	Yes	No	Yes	No
2.Reports to legislature	Yes	Yes	Yes	Yes	Yes
<b>Policy decisions</b>					
1.Decisions announced immediately	Yes	Yes	Yes	Yes	Yes
2.Press conferences	No	Yes	Yes	No	Yes
3.Press releases	Yes	Yes	Yes	Yes	Yes
4.Minutes published	Yes	No	Yes	Yes	No
5.Precise voting result published	Yes	No	Yes	Yes	No
<b>Economic assessments</b>					
1.Reports on monetary policy	H-year	M	M	Q	Q*
2.Forecasets released	H-year	H-year	H-year	Q	Q*
3.Quantitative risk assessments	No	No	No	Yes	No

Source: BIS, 74<sup>th</sup> Annual Report, June 2004, p76 and the presenter.

\* The CBC issues "The prospects for Taiwan and foreign economies" right after its monetary policy decisions of the board meeting in each quarter.

# Monetary Policy and Liquidity Management-Communication Issues

	<b>Required Reserves/ Excess Reserves</b>	<b>Liquidity Reserves</b>
Daily	On-line reporting	Report selected balance sheet items on-line.
Monthly	Financial statements auditing	1. Liquidity assets auditing 2. Maturity mismatch reporting
What if violate regulations	Get a fine	The CBC will submit unqualified institutions to the FSC and the Council of Agriculture to require institutions to improve in a specific period.



# Liquidity provision and monetary policy

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**Thank you for  
your attention**

