



恒生銀行

HANG SENG BANK

Member HSBC Group

Through the Looking Glass : Monetary Statistics

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15 February 2003



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Inside Monetary Statistics

1. Consolidated Balance Sheet

⌘ The true picture.

2. HKD Loan/Deposit Ratio, Liquidity & Reserves

⌘ How do banks deploy deposits ?

3. Changes in Total M3

⌘ Where does the money coming from ?



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Trial Balance Sheet : Banks + DTCs (December 2002)

Liabilities		Assets (HKD Bn)	
Due to banks in HK	394	Cash	14
Due to banks abroad	1,394	Due from banks in HK	395
Deposits	3,318	Due from banks abroad	1,919
NCD outstanding	211	Loans	2,077
Debt instruments outstanding	39	NCD issued in HK	81
Capital, reserves & others	637	NCD issued outside HK	53
		Debt instruments	1,109
		Other assets	345
Total Liabilities	5,993	Total Assets	5,993

Source: HKMA



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The Consolidation Process

- Netting the interbank assets / liabilities
- Re-grouping of certain items

Liabilities		Assets (HKD Bn)	
Due to banks in HK	394	Cash	14
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		Debt instruments	1,109
		Other assets	345
Total Liabilities	5,993	Total Assets	5,993



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Consolidated Balance Sheet

(December 2002)

Liabilities		Assets (HKD Bn)	
Deposits & NCD	3,449	Loans	2,077
Due to banks abroad	1,394	Due from banks abroad	1,919
Capital & others	676	Other assets	1,523
Total Liabilities	5,519	Total Assets	5,519

Source: HKMA



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The Last 5 Years

	Liabilities (HKD Bn)		
	Dec 97	Dec 00	Dec02
Deposits & NCD	2,791	3,601	3,449
Due to banks abroad	3,980	1,752	1,394
Capital & others	714	661	676
Total	7,485	6,014	5,519

	Assets (HKD Bn)		
	Dec 97	Dec 00	Dec02
Loans for use in HK	2,230	1,965	1,834
Loans for use outside HK	1,891	496	243
Due from banks abroad	2,310	2,450	1,919
Other assets	1,054	1,102	1,523
Total	7,485	6,014	5,519

Source: HKMA



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Observations :

1. The Shrinking Balance Sheet

- Business is getting tough

2. Falling Offshore Items

- Diminishing presence of Japanese banks

3. Falling Loans and Rising Deposits

- Excessive liquidity



HK Dollar Loan / Deposit Ratio Fell below 100% in December 1998



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Why Did L/D Ratio > 100% ?

Where Did the Money Come From ?



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Adjusted HK Dollar Loan / Deposit Ratio

Adjusted Loans = Customer Loans + **Net borrowing to local banks**
+ **Holding of acceptances and bills of exchange**

Adjusted Deposits = Customer Deposits + **Net HKD NCD issued**
+ **Net HKD borrowing from abroad**



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Adjusted HK Dollar Loan / Deposit Ratio



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Observations :

- 1. When there is a loan, there is funding.**
- 2. Foreign banks in Hong Kong may used HQ balance sheet to support local lending.**



Liquidity Ratio Required by Banking Ordinance

$$\text{Liquidity Ratio (\%)} = \frac{\text{Liquefiable Assets}}{\text{Qualifying Liabilities}}$$

Liquefiable Assets:

- Net interbank lending < 1 mth
- Export bills < 1 mth
- Loan repayments
- Marketable debt securities

Qualifying liabilities:

- Net interbanking borrowing < 1 mth
- Total of other 1 mth liabilities



**Liquidity should exclude
local interbank claims, i.e.
Systemic Risk**



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Components of Estimated Reserves (June 2002)

<u>Bank Balance Sheet Items :</u>	<u>(HKD Bn)</u>
HKD cash in vault	12
Due from banks abroad	2,039
Due to banks abroad	-1,438
Adjustment item	
- FCY loans for use abroad	242
- FCY loans, others	7
Acceptances & bills of exchange	48
Commercial papers	301
Foreign currency investments	366
Estimated Reserve Assets	1,578



Estimated Reserves Ratio



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**Estimated Reserve Ratio > 40%
reflects prolonged weak credit**



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Exchange Fund Balance Sheet (June 2002)

Liabilities		Assets (HKD Bn)	
Certificate of indebtedness	113	Cash	16
Government notes & coins	6	Deposits with banks in HK	47
Clearing balance	1	Investment	879
Exchange Fund papers	118	Fixed assets	1
Deposits by banks in HK	38	Other assets	33
Government's Deposit	358		
Other liabilities	28		
Accumulated surplus	314		
Total Liabilities	976	Total Assets	976

Required Reserve = Amount due from Monetary Authority



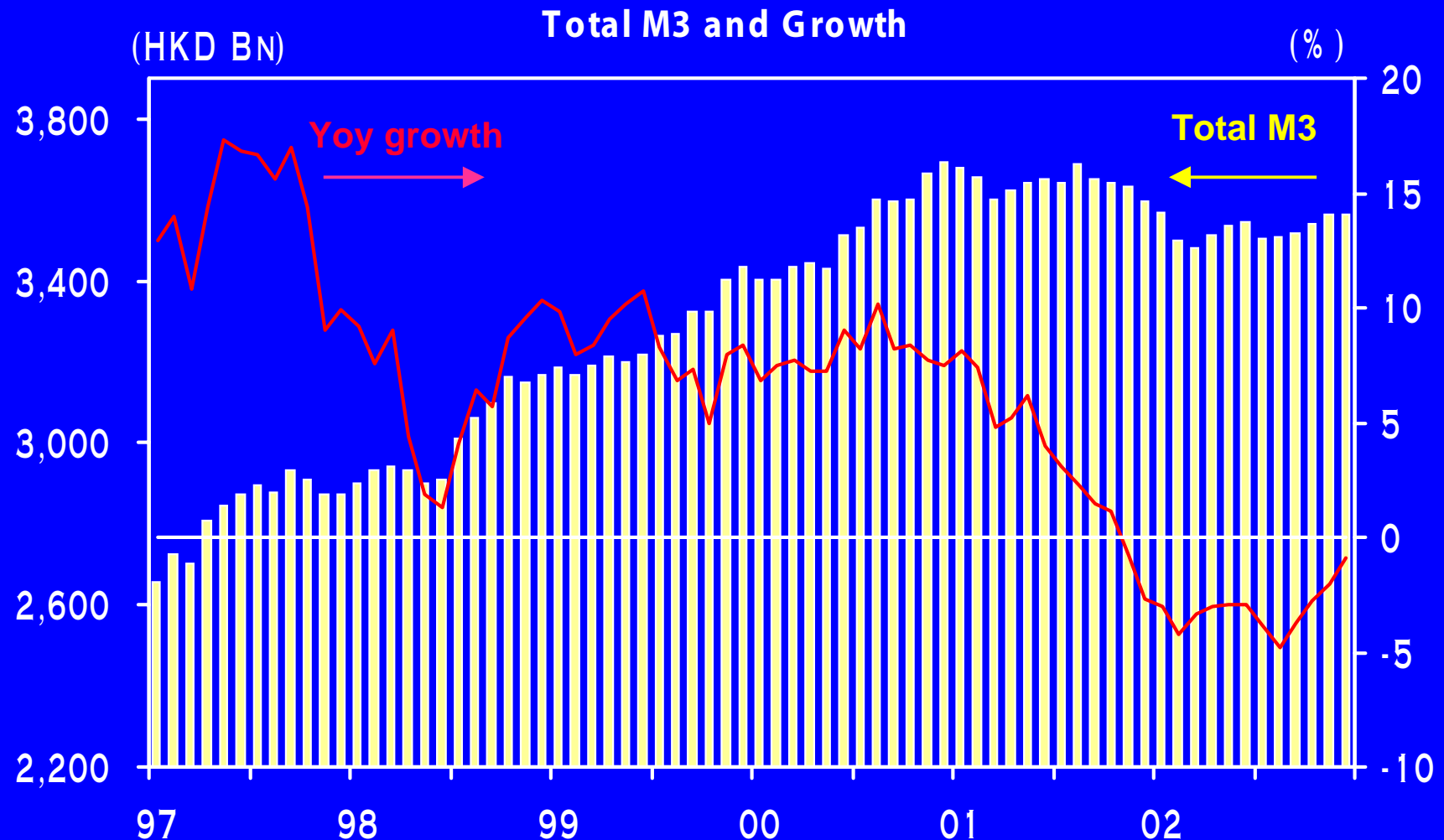
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$$\begin{aligned}\text{Classical Reserve Ratio} &= \text{Due from Exchange Fund} / \text{Customer Deposits} \\ &= (1+118+38) / (3318-47) \\ &= 4.8\%\end{aligned}$$



Money Supply Growth - Where Does it Come from ?



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Balance Sheet of All Authorised Institutions (December 2002)

Liabilities		Assets		(HKD Bn)
(A) {	Deposits & NCD	3,449	Loans	2,077
(B) {	Due to banks abroad	1,394	Due from banks abroad	1,919
	Capital & others	676	Other assets	1,523
Total Liabilities		5,519	Total Liabilities	5,519

$$\begin{aligned}
 \text{Total M3} &= (A) + \text{Currency in Public} \\
 &= (C) - (B) + \text{Currency in Public}
 \end{aligned}$$

Source: HKMA



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Source of M3

**Total M3 = Total Assets - Total Non-deposit liabilities
+ Currency in Public**

**= Domestic Credit + Net Foreign Assets
+ Other HKD Assets**



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Components of M3

(HKD Bn)	
Components	As at end of Dec 2002
Domestic credit in HK	2,328
Coins issued	6
Loans and advance in HK	1,834
Investment in HKD	488
Interbank lending in HK	2
Net Foreign Assets	1,590
Net claims on banks abroad	578
Loans & advance abroad	243
Investment in FCY	720
Notes issued	118
Other FCY assets	104
Other FCY liabilities	-173
Other HKD Assets	-356
Other HKD assets	145
Other HKD liabilities	-501
Total M3	3,562



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Source of Change in Money Supply

$$\begin{array}{ccccccc} \text{Change in} & & \text{Change in} & & \text{Change in} & & \text{Change in} \\ \text{M3} & = & \text{Domestic} & + & \text{Net Foreign} & + & \text{Other} \\ & & \text{Credit} & & \text{Assets} & & \text{HKD Assets} \end{array}$$

Money Supply growth comes :

- either through domestic credit expansion
- or Net inflow of funds to non-bank sectors



Changes in M3 Components Since 1998

$$\text{Change in Total M3} = \text{Change in Domestic Credit} + \text{Change in Net Foreign Assets} + \text{Change in Others Assets}$$

(HKD Bn)

	1998	1999	2000	2001	2002
Domestic Credit	-100	-118	+107	-43	-14
Net Foreign Assets	+372	+408	+187	-33	-19
Other HKD Assets	+25	-24	-36	-23	+1
Total M3	+297	+266	+258	-99	-32
Cash in Public Hands	+1	+18	-8	+10	+12
HKD Deposits	+169	+77	+99	+6	-23
Swap Deposits	-13	-1	-24	-2	-1
FCY Deposits	+140	+172	+191	-113	-20



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Observations:

- 1. Money supply growth between 1998 - 1999 arose mainly from inflow of funds.**
- 2. In 2000, credit expansion and funds inflow led to rising money supply.**
- 3. A reverse in funds inflow in 2001 - 2002 led to contraction in money supply.**



Balance of Payment vs Net Foreign Assets

	(HKD Bn)				
	98	99	00	01	02(Q1-Q3)
Current Account	+34	+93	+71	+96	+90
Non-reserve Capital Account (Exclude banking sector)	+194	+296	+273	-148	-146
Capital Transfer	-18	-13	-12	-9	-12
Error & Omission	-3	-10	-13	+2	+44
Balance of Payment (Exclude banking sector)	+207	+366	+319	-59	-24
	98	99	00	01	02
Domestic Credit	-100	-118	+107	-43	-14
Net Foreign Assets	+372	+408	+187	-33	-19
Other HKD Assets	+25	-24	-36	-23	+1
Change in M3	+297	+266	+258	-99	-32



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Thank You



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