



『Developing Bond Market in Emerging Market Economies』

High Level Workshop 2007

Korean Bond Market

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I. Recent development of Korean Bond Market

II. Anatomy of Double Mismatches in Korea

Primary Market

(in trillions of KRW)

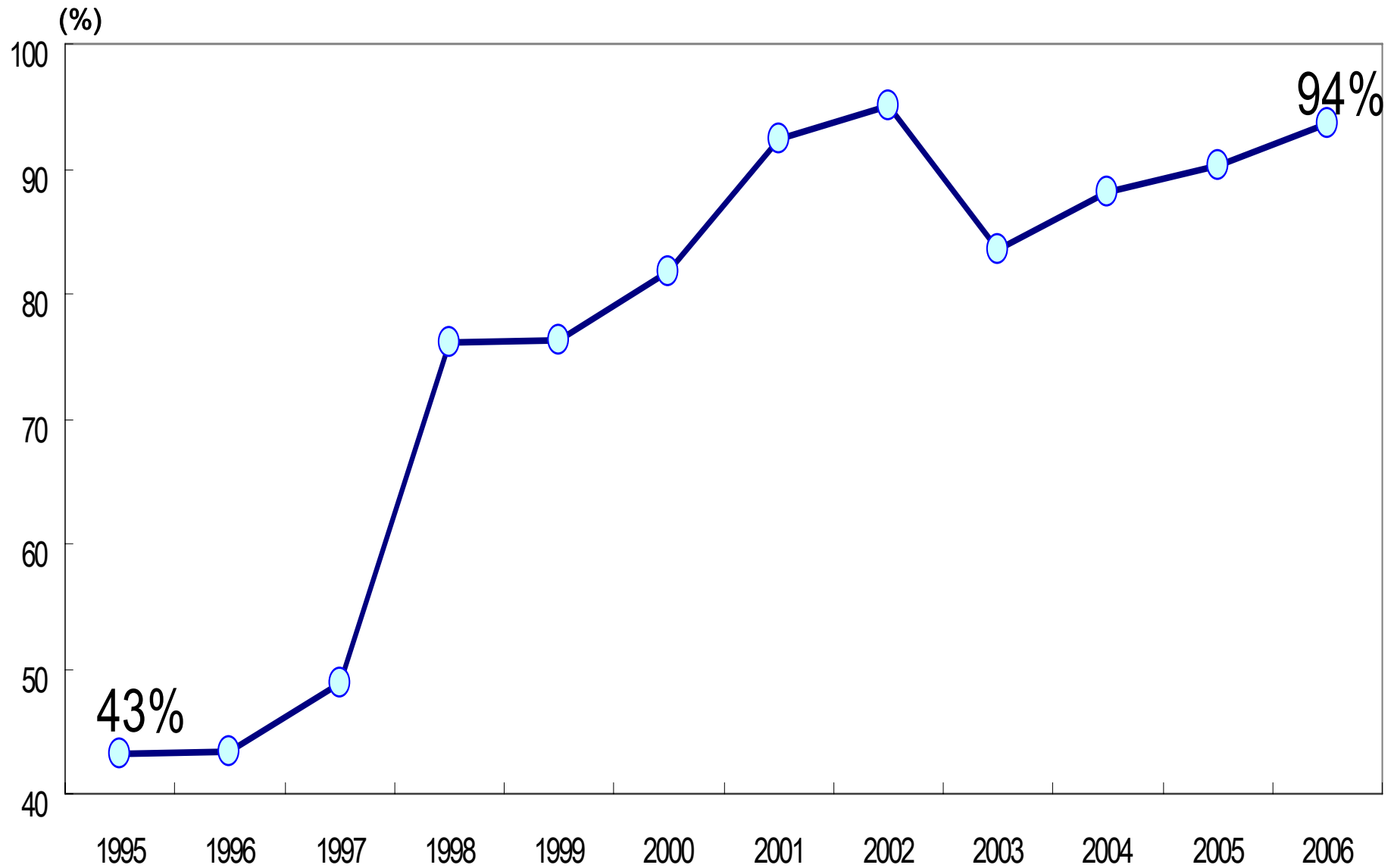
| | 1996 | 1998 | 2000 | 2002 | 2004 | 2006 |
|----------------------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Government | 23.3 | 41.6 | 71.2 | 90.2 | 170.5 | 254.3 |
| MSB¹ | 30.0 | 45.7 | 66.4 | 83.9 | 142.5 | 158.4 |
| Corporate | 61.3 | 122.7 | 143.1 | 162.7 | 131.0 | 121.7 |
| Financial Inst. | 28.9 | 48.5 | 73.0 | 104.4 | 115.7 | 165.1 |
| Others ² | 28.8 | 86.2 | 86.6 | 139.9 | 116.4 | 105.1 |
| Total (A) | 172.3 | 344.6 | 440.3 | 581.7 | 676.8 | 804.5 |

Notes: 1. Monetary Stabilization Bond issued by The Bank of Korea

2. Bonds issued by Agencies and Municipal governments

Sources: BOK, Financial Supervisory Service.

Outstanding volume of bond market to GDP

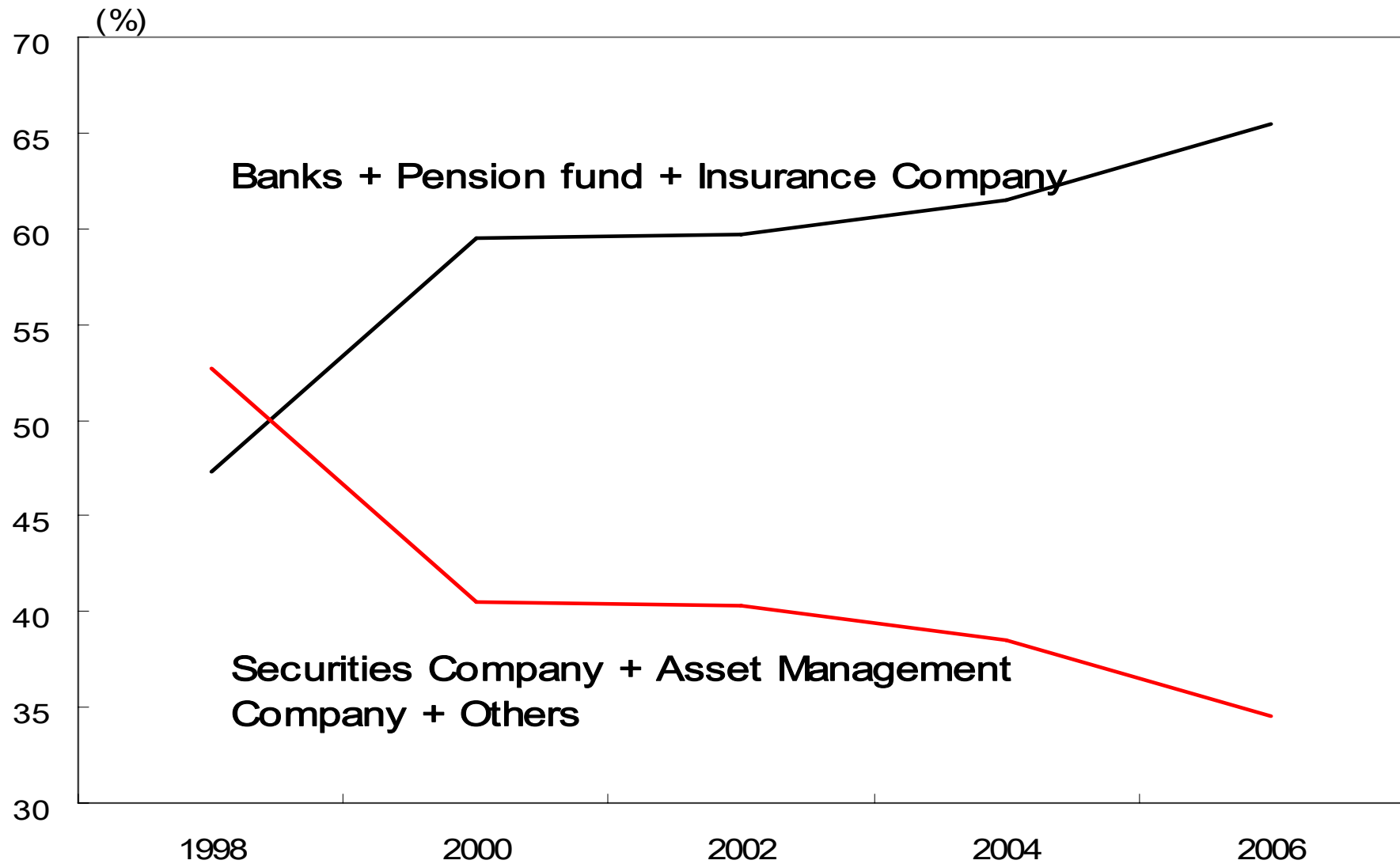


Bond Investors

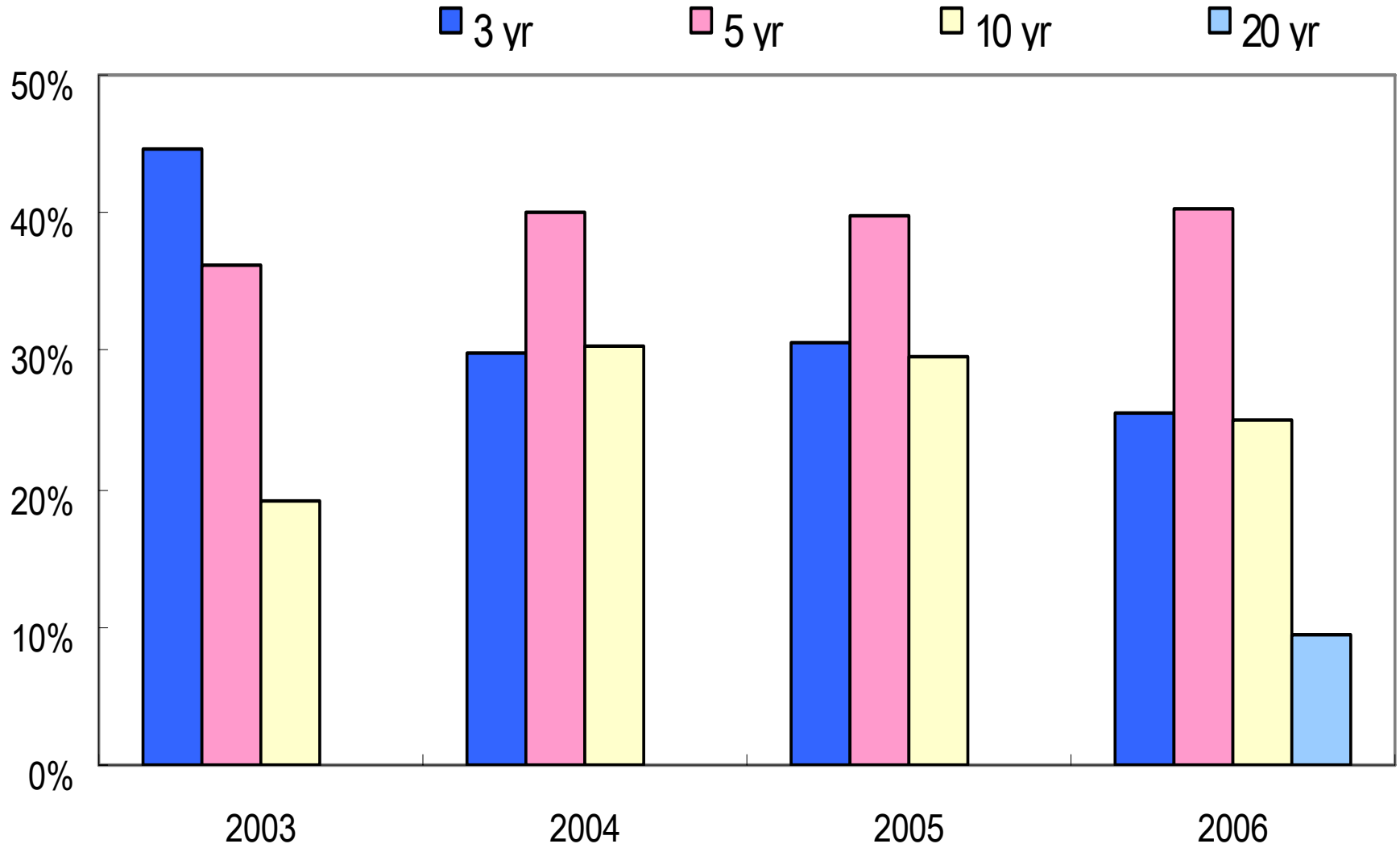
(in trillions of KRW, %)

| | 98 | 00 | 02 | 04 | 06 |
|---------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| Banks | 158.2(45.9) | 224.0(50.9) | 222.3(38.2) | 217.5(32.1) | 267.5(33.3) |
| Pension and fund | 0.3(0.1) | 18.9(4.3) | 61.8(10.6) | 109.5(16.2) | 145.2(18.0) |
| Insurance company | 4.5(1.3) | 18.9(4.3) | 63.4(10.9) | 89.2(13.2) | 114.0(14.2) |
| Securities company | 29.6(8.6) | 47.9(10.9) | 66.6(11.5) | 79.7(11.8) | 103.1(12.8) |
| Asset Management company | 138.2(40.1) | 82.8(18.8) | 89.2(15.3) | 105.9(15.7) | 85.6(10.6) |
| others | 13.8(4.0) | 47.8(10.8) | 78.4(13.4) | 75.0(11.0) | 89.1(11.1) |
| Total | 344.6(100.0) | 440.3(100.0) | 581.7(100.0) | 676.8(100.0) | 804.5(100.0) |

Bond Investors



Treasury Bond Issuance



Recent development of Korean Bond Market

- ◆ **Treasury Bond Market Infrastructure reinforced:**
 - ❖ **Primary Dealer System (1999.7)**
 - ❖ **KTB Futures (1999.9)**
 - ❖ **Delivery versus Payment (1999.11)**
 - ❖ **Fungible Issue (2000.5)**
 - ❖ **Mark to Market (2000.7)**
 - ❖ **Strips, Issuance of 20yr Treasury Bond (2006.3)**
 - ❖ **Inflation-indexed Bond (2007.3)**

Recent development of Korean Bond Market

- ◆ Progress in the Corporate Bond Market
 - ❖ Introduction of advanced financial instruments or structured products
 - ABS(1999)
 - MBS(1999)
 - ❖ Competition among Credit Rating Agencies
 - ⇒ upgraded credit analysis technique
 - ⇒ unguaranteed corporate bonds increase
 - 1996 (8.4%) → 2006(99.4%)

Liquidity of Korean Bond Markets

| | Treasury Bond Bid/Offer Spread | KTB Futures Bid/Offer Spread | IRS Bid/Offer Spread |
|----------|-----------------------------------|---------------------------------|-------------------------|
| Spread | 0.5-2bp | 1-3bp | 2-3bp |
| Maturity | 3-20yr | 3yr | Up to 10yr |

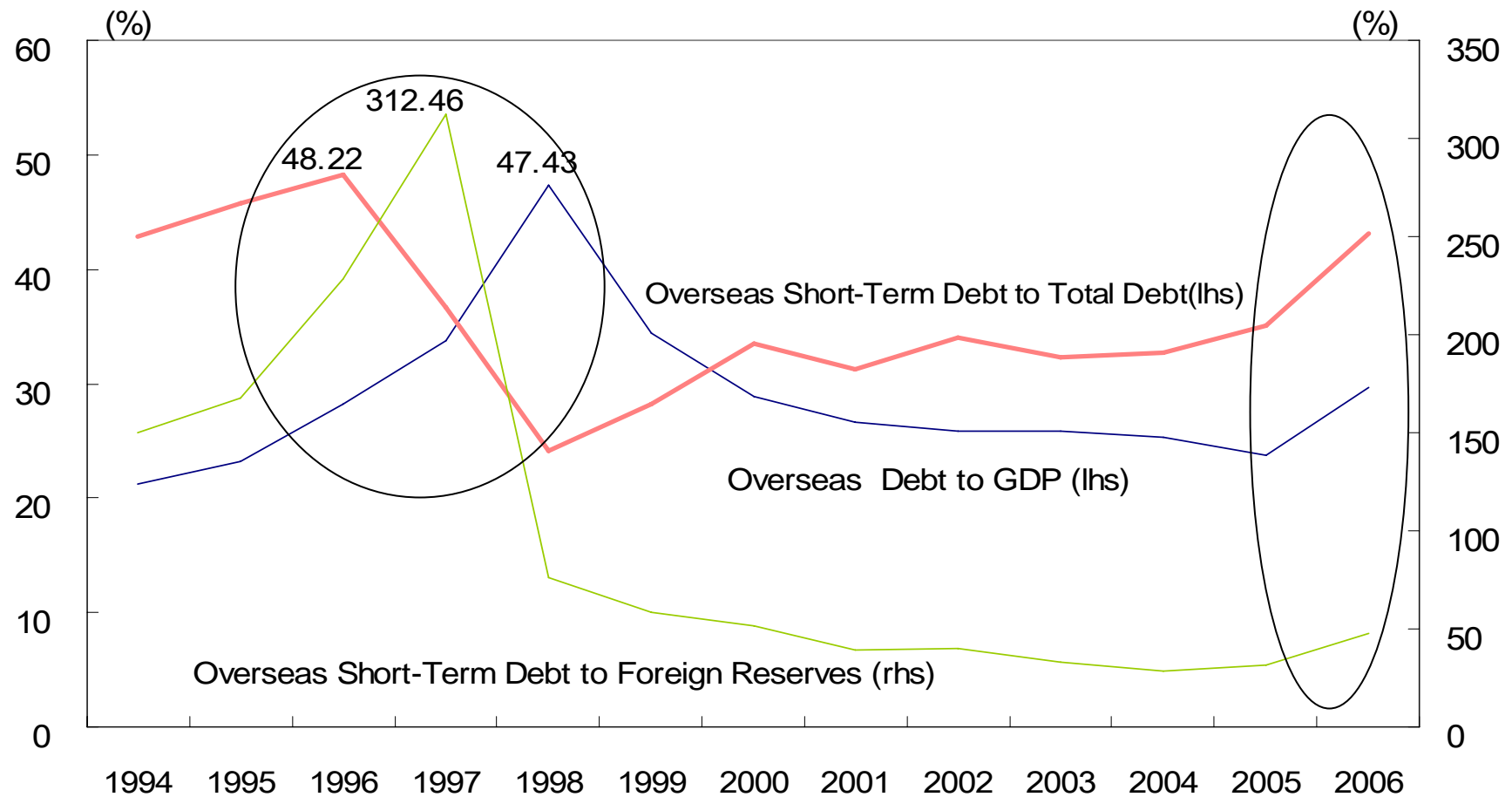
Notes: Barclays Capital, Asia Local Markets Guide Dep. 06

Notes: Korea's Sovereign debt rating : A3 (Moody's), A (S&P)

Anatomy of Double Mismatches in Korea

❖ Financial Crisis in 1998)

- financial deregulation ⇒ excessive overseas short term debt
- ⇒ Double Mismatch (Currency & Maturity mismatches)



Case in 1997 ~ 1998

| | Trigger | Source of Mismatch |
|----------------|-------------------------------------|---|
| ▪ Case in 1998 | Local Banks: Merchant Banking Corp. | Short term dollar funding/ Long term, illiquid foreign asset investment (EM bond etc.) |
| ▪ Case in 2006 | Foreign banks | Short term dollar funding / Long term investment (KTB, MSB, etc.) |

Merchant Banking Corporations in 1997

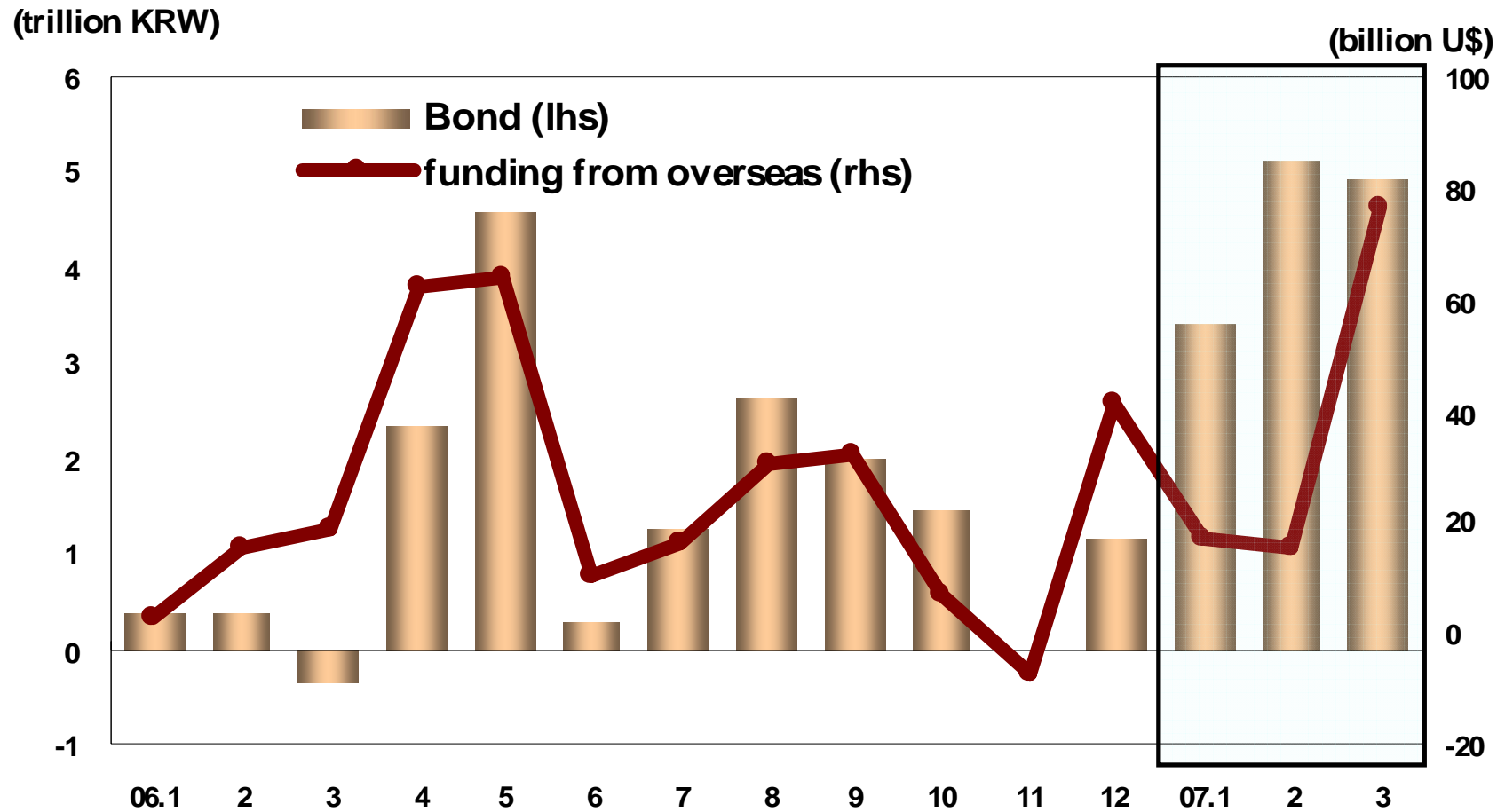
MBC's Foreign Assets and Liabilities (as of 1997.8.10)

| | | | | (Billion US\$) | |
|---------------------------------|-------|---------|--------------------------------------|----------------|---------|
| Intermediate & long term assets | 135.2 | <92.9> | Intermediate & long term liabilities | 50.8 | <35.3> |
| Short term assets | 10.4 | <7.1> | Short term liabilities | 93.3 | <64.7> |
| Total foreign assets | 145.6 | <100.0> | Total foreign liabilities | 144.1 | <100.0> |

「Short-term funding in US\$ → long term investments in EM Bonds in local currency」

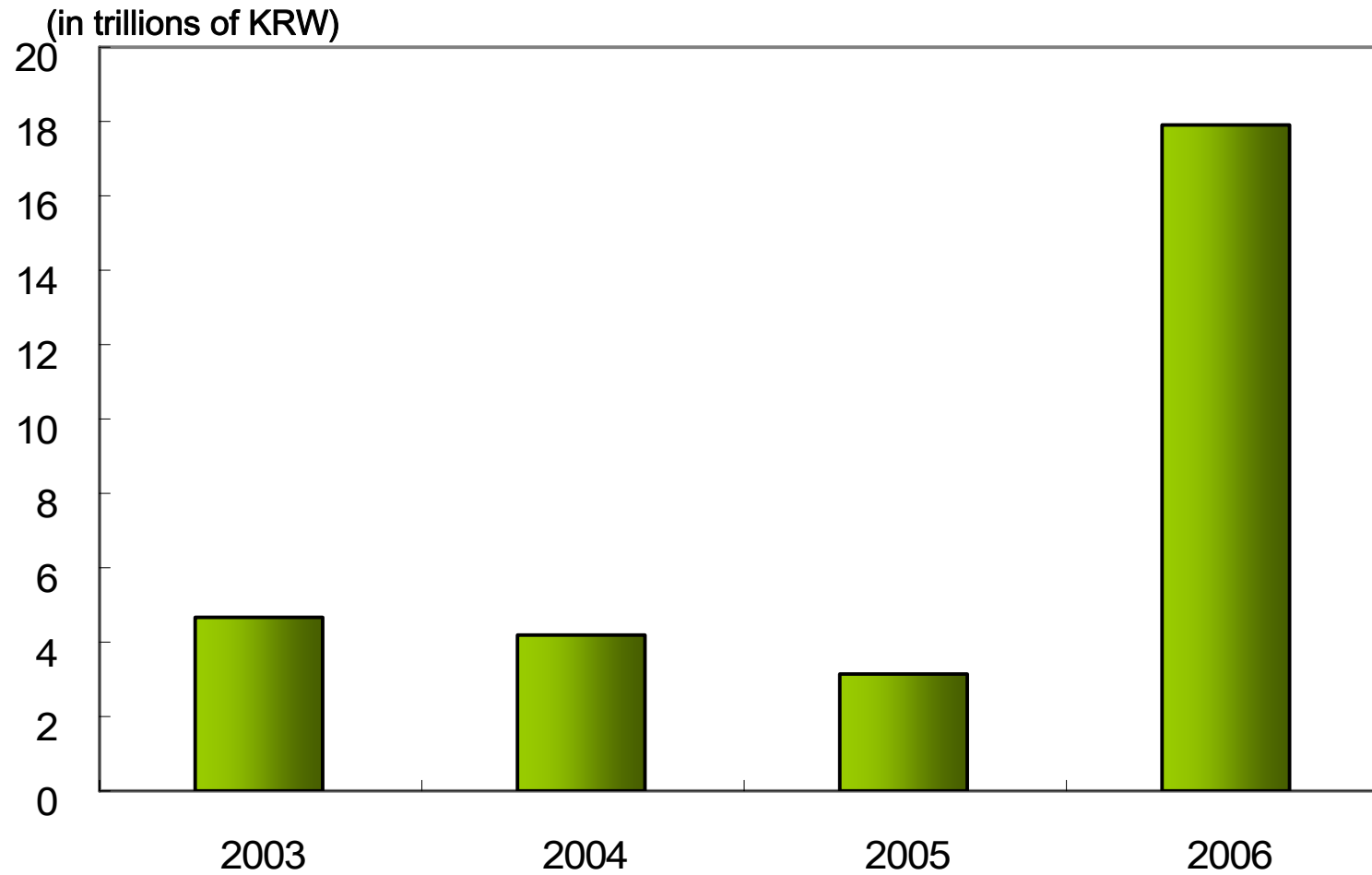
⇒ Maturity mismatch + currency mismatch

Foreign banks funding from overseas

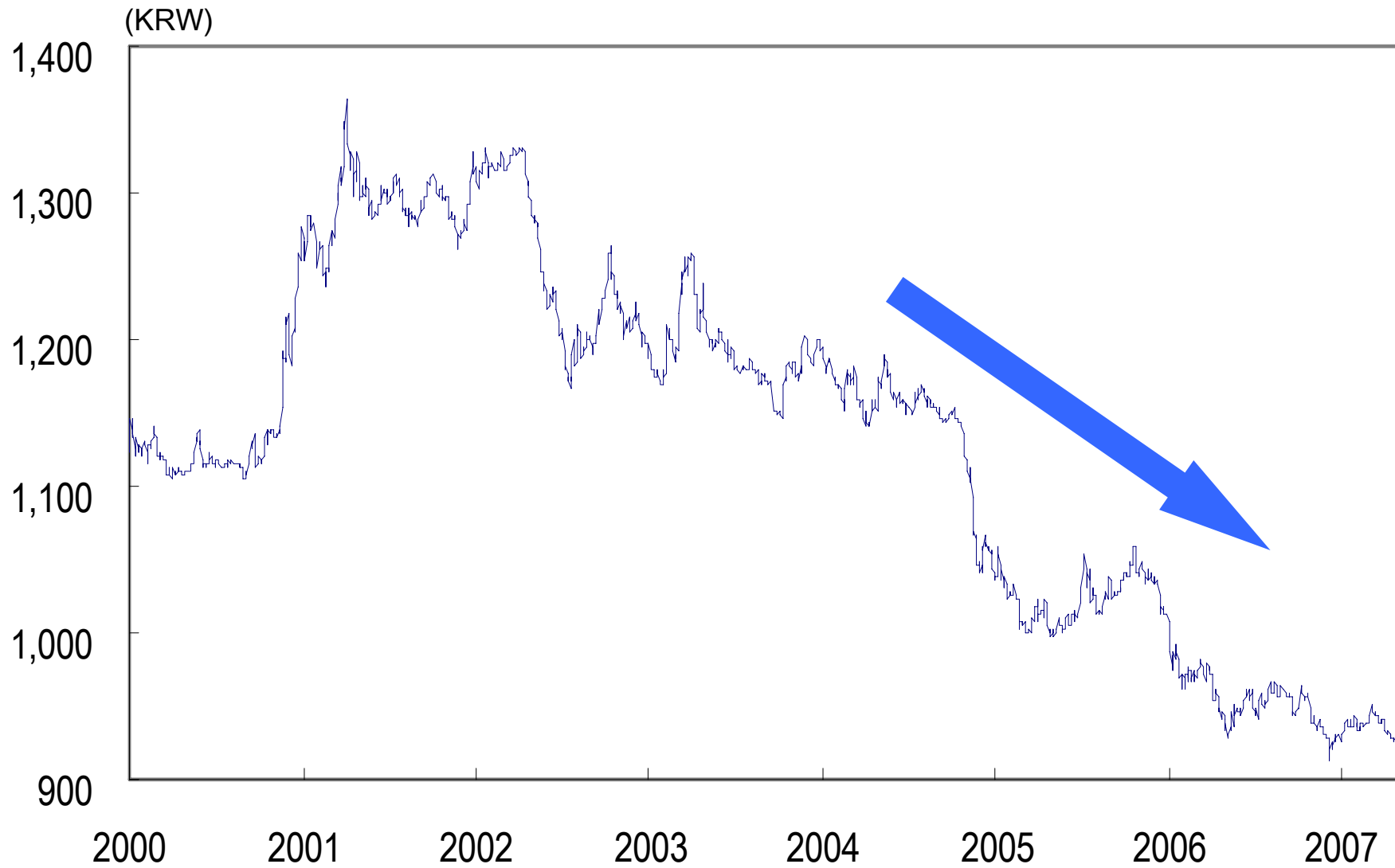


Case in 2006

Foreign banks purchase of bonds

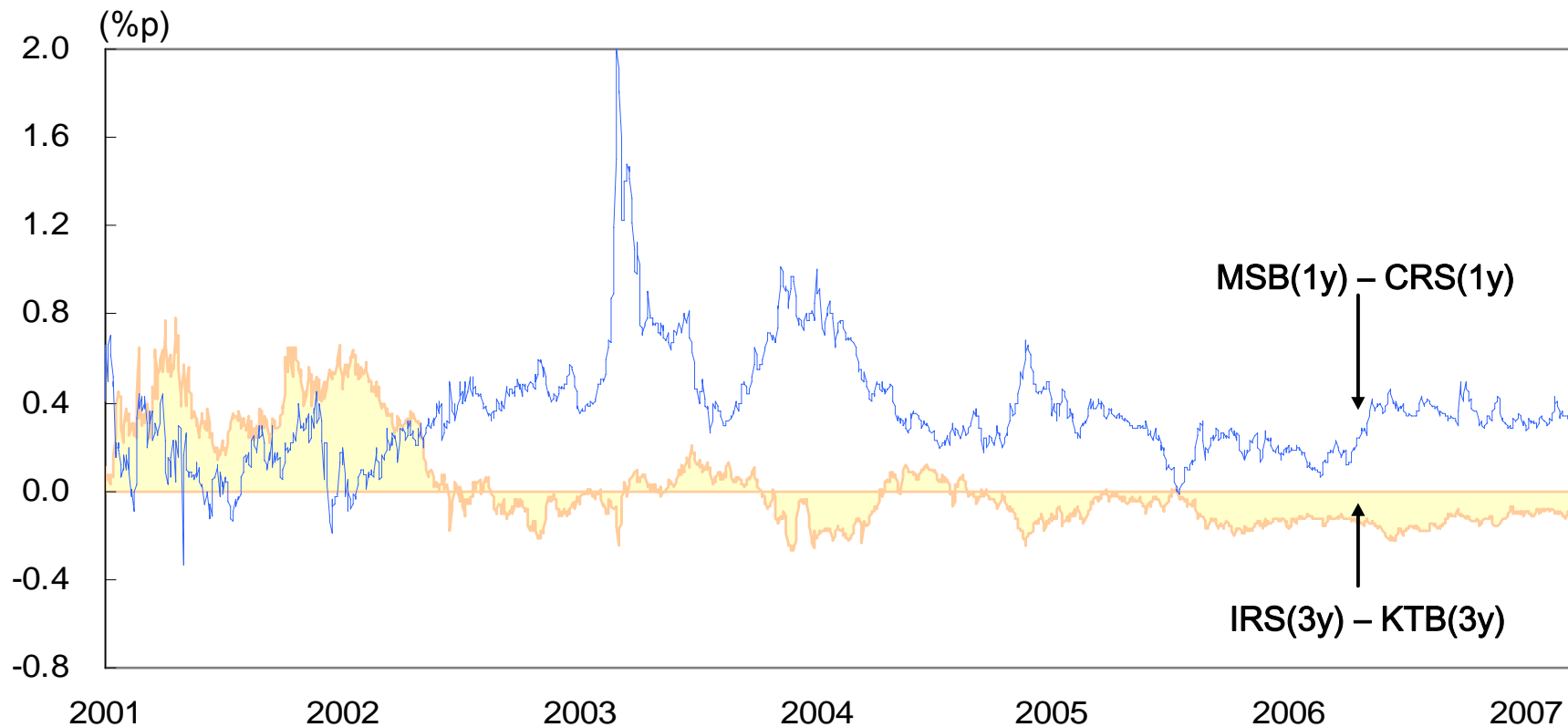


Exchange rate ₩/\$



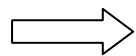
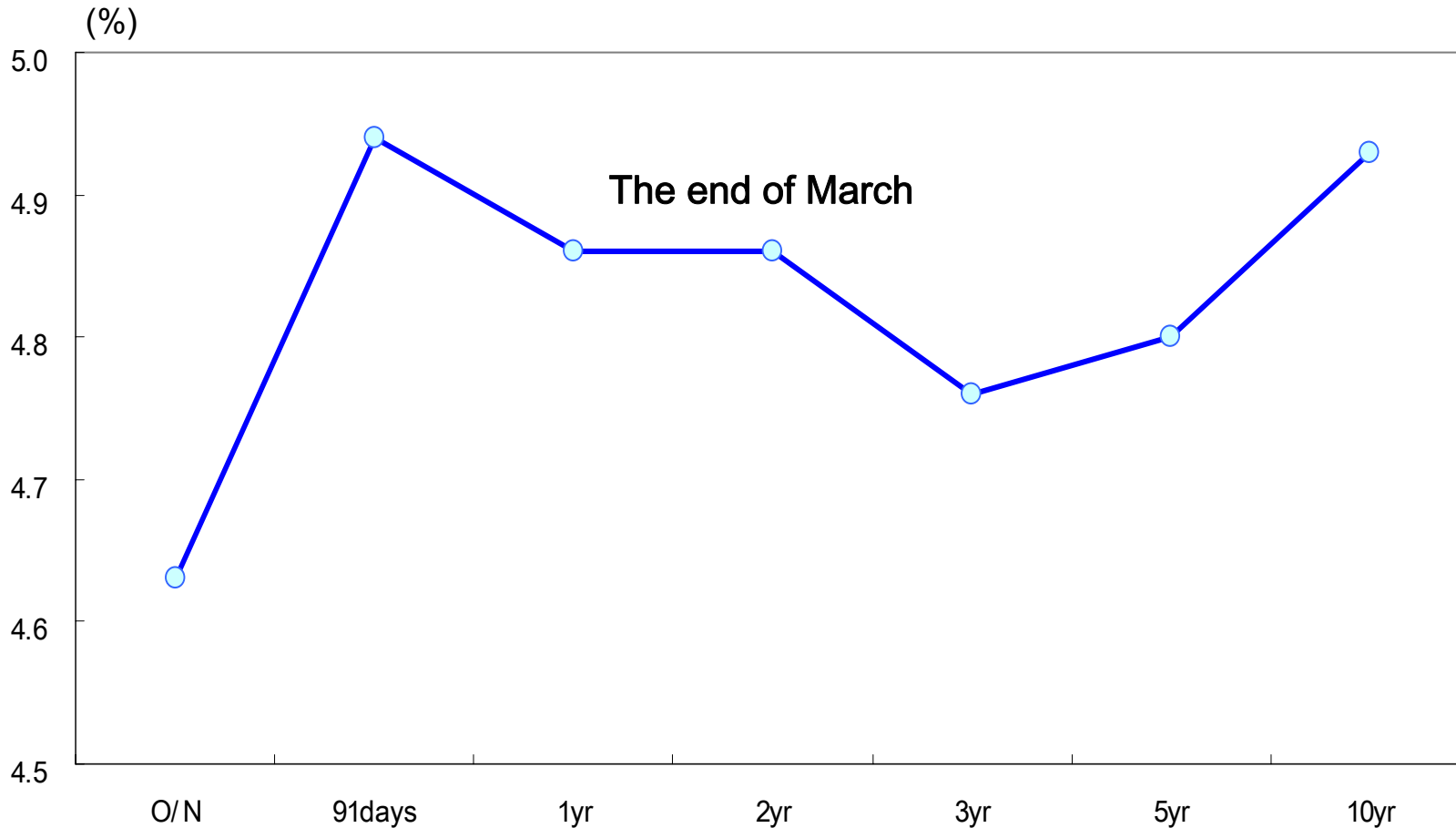
Incentives for Foreign banks funding from Overseas

- ❖ Spread (MSB – CRS) expanded => Incentive for Arbitrage
- ❖ The yield of KTB is higher than IRS rate, which means banks can fund with lower cost than Government.
 - ⇒ Incentive for Structured Notes (Foreign banks act as a swap bank → purchase KTB to hedge swap position.)



Impact upon the yield curve

⇒ “U-shaped YC”



The Banking Regulator warned the foreign banks against the high level of overseas short-term debt. (April 18)